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Herbert Bashford

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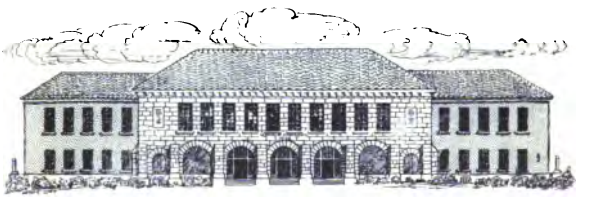

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The Rhododendron.

WESTERN SERIES OF READERS—VOL. III.

EDITED BY
HARR WAGNER

NATURE STORIES

OF THE

NORTHWEST

BY

HERBERT BASHFORD

SAN FRANCISCO
THE WHITAKER & RAY COMPANY
(INCORPORATED)
1898

DEPARTMENT OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

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INTRODUCTION.

THE child that has been taught to watch a blade of grass come up or the sun go down, has the power of knowledge. It should be trained to see the things near at hand. The Pacific Coast, and that part of it "where rolls the Oregon"—the Puget Sound country, all the broad expanse of the emerald North—is rich in material. The black bear, the grouse, the sea otter, the salmon, the rhododendron, have their stories. The lessons the child learns from nature are lessons of truth. Nature never lies.

A child should be taught the outdoor life of the West.

Nature is truthful.

Trees, rocks, flowers, and shells tell a marvelous story of truth. In this book the stories of nature are told by a truth-seeker. The poet has ever been the true interpreter of nature, since the singer of old said, "He leadeth me beside the still waters."

The poet the true interpreter.

Herbert Bashford has done a work in preparing this volume that will be appreciated by the public school teachers. The writers of the text-books for schools have been of the East and for the East. They do not always understand or appreciate the color of the West. The teacher and the pupil are frequently at a loss, therefore, not only for the method of study, but for the simple facts.

The aim of the author has not been to give a complete book on nature, but to give a few typical studies that, used as supplementary reading, will open the wide field of outdoor life to the pupil.

The method of study. The teacher should inspire the child to plant the seed and watch each stage of its growth. This is the true method in nature study. The child should be trained to see the bird and hear its song from the tree. The picture of a bird in a book may be a beautiful picture, but it is a poor bird. Before the story of the rhododendron is read, for instance, each pupil should have been taught to examine it closely, not only in its bloom, but in each successive stage of its growth. This is true of each story.

Correlate. The teacher should also keep in mind that the study of the natural objects will also develop the child's power of expression. A rude drawing, no matter how crude, will train the eye and the hand. Reading, language, drawing, truthfulness, are some of the lessons the child should learn from the suggestive work of this book.

Dr. David Starr Jordan says: "Clear thinking and clean acting we believe are the results of nature study. With our children the study of words and abstracts alone may, in its degree, produce the same results. Nature studies have long been valued as a 'means of grace,' because they arouse the enthusiasm, the love of work, which belongs to the open-eyed youth. The child, *blasé* with moral precepts and irregular conjugations, turns with delight to the unrolling of ferns and the songs of birds. Nature is never obscure, never occult, never esoteric. She must be questioned in earnest, else she will not reply; but to every serious question she returns a serious answer. 'Simple, natural, and true' should make the impression of simplicity and truth. Truth and virtue are but opposite sides of the same shield. As leaves pass over into flowers and flowers into fruit, so are wisdom, virtue, and happiness inseparably related."

HARR WAGNER.

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THE COUGAR.

He lies in wait where woods are dim,
Low-crouched upon a massive limb,
While each leaf shakes at sight of him.

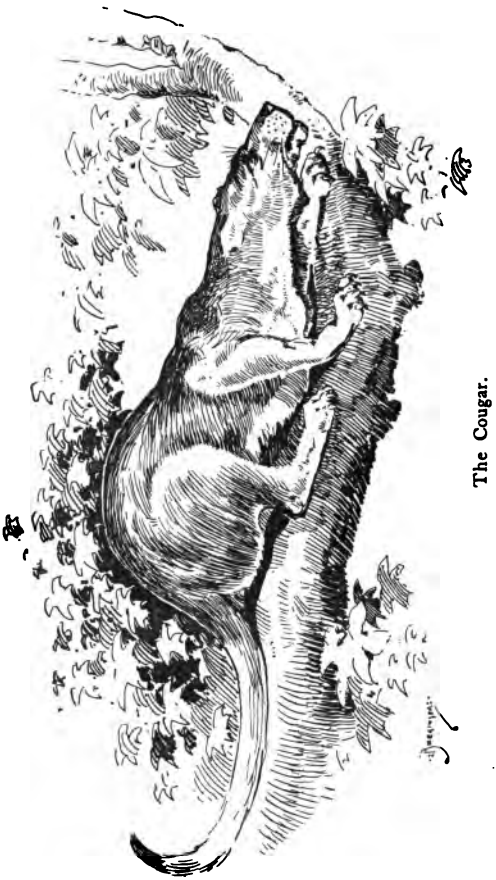
The timid fawn and graceful doe
Tread down the clover blooms below;
Two yellow flames his great eyes grow.

Oh, meek gray doe and spotted fawn,
You little know as you stroll on
That he lurks near with daggers drawn!

And ah, how sudden is the spring,
How keen the claws that earthward bring
The brown-eyed mother shuddering!

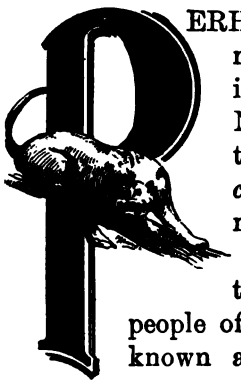
A crimson pool upon the ground;
A low death-wail; the mournful sound
Of weeping from the firs around.

A gory feast with fangs that tear,
A cluster of tall ferns from where
A lone fawn looks in mute despair.



The Cougar.

THE COUGAR.



PERHAPS the animal most feared by man, and which makes its home in the great dark forests of the far Northwest, particularly the mountainous regions, is the cougar (*Felis concolor*). It bears a number of names. Closely resembling the true lion, it was once called the American lion. Among the people of the New England States, it was known as the panther, which word by usage was transformed into painter. In other sections of America it is called the catamount. In South America it is the puma, and in other countries the deer-tiger. The name cougar was given it by the French. It is the only formidable animal of the cat family to be found in the United States. It attains its largest growth in California, where it is again termed the "mountain lion."

Reference Topics.

Variety of Names by which the Cougar is Known.

Habits of the Cougar.

Average Size and Color.

Scientific Name.

The cougar, when full grown, measures about six

feet from the nose to the root of the tail, though one was killed in Western Washington that measured over eight feet. Such instances, however, are exceedingly rare. The average height of this creature at the shoulder is two feet. It therefore presents a slender appearance. The tail is quite long, and the legs very muscular. The claws are like hooks of steel. The head is small compared with the size of the body. The cougar is of a tawny color when grown, while the young ones are marked with several blackish-brown streaks along the sides and back. These disappear when the animal is a year old.

The cougar preys upon birds, rabbits, deer, and other small quadrupeds. In farming districts it frequently makes terrible havoc among sheep, and one of these animals has been known to kill fifty sheep in a single night. It possesses a very gluttonous nature. It prowls mostly during the night, and often gives forth a dismal cry—a sorrowful wail, that it repeats at intervals during its nocturnal wanderings through the dark, lonely woods. It moves with such stealth as to be almost noiseless, and pounces upon its unsuspecting victim with terrible force. Unless prompted by extreme hunger, the cougar seldom attacks a man in the daytime, but on the contrary, will avoid him. At night, however, under the cover of the darkness, it has been known to spring upon travelers or those

encamped in the forest. The light of a camp fire always keeps it at a safe distance, and is the one method adopted by all campers to prevent an attack during the dark hours of the night. Nearly all dogs show great fear when one of these animals is prowling near, and will whine pitifully, evidently realizing the dangerous beast is more than a match for them.

The cougar usually lies in wait for its prey, crouched upon the limb of a tree, and pounces down upon the passing deer, rending it asunder with the powerful hooked claws. When wounded, this creature is a most ferocious antagonist, and in shooting at the cougar the hunter should make very sure of his aim before firing.

The Indians say, that in a battle between the grizzly bear and the cougar the latter always proves the victor. This seems highly probable when we consider the injury to be inflicted by the long keen claws of the beast, and its wonderful strength and agility.

Cougars are rapidly disappearing from our forests, owing to the many new settlers clearing the lands, and are now found principally in the foothills and mountain fastnesses.

BLACKBOARD WORDS.

Cougar (koo'gär), **puma** (pū'mȧ), **quadrupeds** (kwŏd'rupĕds), **gluttonous** (glŭt'ŭ'n-ŭs), **ferocious** (fē-rō'shŭs), **antagonist** (ăn-tăg'ō-nĭst).

THE STORY OF A COUGAR.

"CAMPING out, eh?"

"Yes, sir," I replied.

"Saw your tent, and thought I 'd stop a few minutes. My name's Robinson. I suppose you are killing many birds?" At this juncture the stranger seated himself, and resting his bearded chin between two huge, long hands, regarded us attentively.

"No," I said, "birds are pretty scarce."

"You 're not looking for bear?" he asked, chuckling.

"That's just what we are," cried Ed. Brown, my youthful companion.

"I saw a bear when I was coming up the beach."

"You don't mean it!" I exclaimed, springing from my seat.

"Yes," continued Mr. Robinson, "and if you want to get a shot at him, you slip quietly down to where those dead cedars are to-night and watch. You better keep clear of 'Old Nab,' though."

"Who 's 'Old Nab?'" I asked, wonderingly.

"'Old Nab' is a cougar, he replied, "and he has been prowling around this country for years. He

has killed four oxen that belonged to the logging camp, two or three calves, and several sheep and hogs. He is a sly beast, and a big one. Jim Turner has seen him twice, and says he is a monster. He is the terror of the ranchers, and they would give a great deal to have him killed. But I guess you won't see him. Hope you have good luck."

I thanked him, and he left us as abruptly as he came. The sun was fast sinking down behind the great firs, and Puget Sound, in perfect calmness, spread itself before us. For several moments we said nothing.

"Don't you think he was trying to frighten us a little about this cougar?" suggested Ed.

"He might be," I replied, "but we will watch for the bear anyway."

Accordingly, after supper we sallied forth, both armed with repeating rifles, and in case of an emergency my companion carried the hatchet along. To kill a bear is certainly no small achievement for boys, and I thought, provided we succeeded, what a surprise it would be to the folks at home.

The dead cedars, where we had been directed to go, were probably a half mile distant, as we were not long in reaching them. They were tall, straight, and white as chalk, and stood on the edge of a swampy tract of land a few yards back from the beach, which was covered chiefly with wild crab

apple trees and vine maple. Many prickly poisonous shrubs, known as "devil's clubs," flourished here, and salmonberry bushes grew in rank profusion.

We could scarcely see, as it had now grown quite dark. The moon would rise before long, however, and Ed. suggested that we separate. I consented to go farther on down the swamp, leaving him here. I discovered this was no easy task. The briars scratched my hands severely; but after splashing about through mud and water for a time, I found a comfortable seat in a place where the thicket was not very dense, and began my vigil. I selected an alder near by to climb, if necessary. I felt lonesome, for the surroundings were none too inviting. The moon arose, and a tree threw a black shadow over me. Once a crane, flying out of the swamp, startled me somewhat, with its harsh *quok! quok!* while the frogs croaked dismally. As the night deepened, almost every visible object assumed some shape, weird and fantastic. The moonlight, streaming through the overhanging boughs, lay around me in quivering, silvery bars. Two hours wore slowly away; I concluded that I had not used sufficient caution in secreting myself, when suddenly a branch snapped just behind me. It sounded like a pistol shot, because of the intense silence that prevailed at the time. Cocking my rifle, I changed my position, and in doing so, heard an

animal bound back into the thicket. What if this stealthy prowler were "Old Nab"? I felt my heart pound against my side. The idea of having to battle with such a ferocious cougar was far from being a pleasant one, especially in a lonely swamp, where creeping vines wound themselves thickly among tangled timber, and where a single step might bury me waist-deep in some stagnant pond, thus rendering escape an impossibility. Once more a twig snapped, and I heard distinctly a rustling in the thicket close by me. How awful was the suspense! Then, about twenty feet distant, a long, dark object noiselessly glided across a glimmering streak of moonlight. The creature slowly circled around me, while I, with hand tightly clinching the rifle barrel, hardly dared to breathe. Then I plainly saw two eyes peering from the underbrush, whose sickly, yellow glare made my flesh creep. I became powerless; I was so completely terrified that the idea of using my gun entirely left me. I simply sat staring, for how long I cannot say. Then pointing the rifle in the direction of the big round eyes, I fired. The report was followed by a piercing shriek. Dropping the gun, I started toward the beach, scrambling desperately amid the dense undergrowth; tearing through great crab-apple thickets, plunging recklessly onward, and expecting every moment to feel the sharp hooked claws of

"Old Nab" fasten upon me. Frantically I toiled and floundered in the soft mud, and once, gasping for breath, I went face downward into a foot of green slimy water. Regaining my feet quickly, I tore ahead, neither turning to the right nor the left; sometimes leaping over roots and logs; sometimes skulking beneath mossy branches, and at last I dashed by a dead cedar standing near the swamp's edge, and reaching the beach I fell upon the pebbles utterly exhausted. Here I lay panting. Soon there was a loud "hallo," and Ed. came running toward me.

"Have you shot yourself?" he cried, kneeling beside me.

"No," I said faintly. "It's coming. Look out, or it will leap on you; I can't run another step. Oh, bring me a drink! I'm burning up."

He hastily filled his hat from a little creek that rippled softly over the smooth stones. The cold water revived me somewhat. Then wetting his handkerchief, my companion bathed my hot, bleeding face. I was so weak that I was unable to walk alone, and Ed. assisted me to camp, where I told him in detail of my experience.

After I was resting easily on our bed of cedar boughs, Ed. said that he would keep watch the rest of the night in case the animal should follow us. However, the night passed quietly. My sleep was broken by frightful dreams, and my companion

said I muttered considerably. In the morning I felt weak and strange, but a cup of strong coffee cheered me up, and a little after sunrise we started to get my rifle.

We had tramped only a short distance when we met Mr. Robinson.

"Well," he said, scrutinizing me carefully, "you've got a badly scratched face, young man."

Then I related to him my adventure.

"I'm hunting my oxen, and they might be down there where you're going, and I'll go with you," said the old man. "I guess probably you saw a wildcat. They're pretty thick in the swamp."

On arriving at the dead cedar I took Ed's gun and went ahead, cautiously following my footprints made the previous night. When I announced that we had reached the spot, there was a momentary pause.

"See!" suddenly exclaimed Mr. Robinson, bringing his hand down upon my shoulder, "there, under that bush!"

I hardly believed my eyes. Before us lay a huge tawny beast. The head was besmeared with blood, while its half-open mouth disclosed two long yellow tusks.

"Hoop!" ejaculated Mr. Robinson, you've killed 'Old Nab!'"

And so I had. A prouder youth than I could not have been found in the whole country.

The Black Bear.

THE BLACK BEAR.

THE black bear (*Ursus Americanus*) is more frequently seen in our woods than either the brown bear or the grizzly. In truth, the latter is a stranger to us. The black bear is less savage than any other of the great family to which it belongs. It escapes the hunter, if such a thing is possible. Its sense of smell is very acute, and it is quickly alarmed. However, if taken unaware, it often assumes an unconcerned air, and will regard one with curiosity shining from the little black eyes. It only offers an attack when forced to do so, save in the case of the mother with her young, when, like all beasts at this time, she is quite apt to show fight, and is an exceedingly dangerous creature to encounter. I know an Indian of the Quinault tribe, who had a desperate battle with a mother bear that he

Reference Topics.

Is the Black Bear as Savage as the Grizzly?

What is Meant by the Word Hibernate?

The Food of the Black Bear.

Where Found in Different Seasons?

Give One of Its Characteristics?

had wounded. His only weapon was a knife, and they fought for some time, the bear tearing him with her teeth and claws in a frightful manner. At last, with one desperate effort, he plunged the knife into her heart, then fainted from loss of blood.

Unlike the more formidable grizzly, the black bear does not hug its adversary, but bites and tears like a dog. Its average weight is about three hundred pounds, although several have been killed weighing considerably more. It climbs small trees nearly as quickly as it does large ones, and it is said that the black bear makes lines of travel through the forests by tearing the bark in places from the trunks of firs and spruces.

During the winter months it hibernates, or in other words, takes a long sleep, choosing for its place of concealment a deep thicket or the hollow end of an old log. It used to be thought that the bear kept itself alive during this period by sucking its toes, but this theory is entirely false; its fat sustains it. When the bear arouses from its lengthy sleep, it is poor and thin, and looks very much different than when it went to bed. However, by the time it wakes up, the yellow-hearted skunk cabbage has begun to ripen in the swampy lands, and it dearly loves this plant, and enjoys splashing about, with its great broad feet, in the ponds, and feasting upon the tender green leaves. The skunk

cabbage serves the bear as food until the luscious salmonberries are ripe, along in May, at which time it enjoys a rare treat indeed. It also relishes the thimbleberries greatly, and soon grows fat with such an abundance of food wherever it goes. The shaggy, awkward-appearing creature is an excellent berry-picker, too, as it stands on its hind feet and draws the bushes to its mouth from the right and left with its powerful paws. When the various berries have disappeared from the lowlands, which is toward midsummer, the bear leaves the luxurious undergrowth—the damp, cool places where the mosses grow—and visits the hillsides, over which the blackberry vines are tangled, and the huckleberries thrive in rank profusion. Then, during the early winter, the bear, finding the hills quite destitute of berries, returns to the creek bottoms. By this time the salmon are ascending the various streams, coming in from the ocean, and the bear spends its days, before housing itself for the winter, in catching fish, and a better fisherman cannot be found. It is now sleek and fat. Its fur is glossy, and brings a good price in the markets. The flesh, before the bear has eaten of fish, is often used as food, and tastes quite like pork.

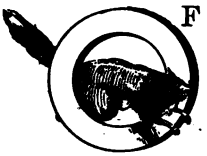
The black bear is a creature full of curiosity. It likes to examine into the nature of things, and takes special delight in exploring the interior of a

deserted cabin, and looking into boxes and barrels, to see what strange object it may find. In captivity it becomes quite tame, and at times shows real affection for its keeper. But at best it is not to be trusted, and I would advise all boys and girls to keep well out of reach of its paws.

BLACKBOARD WORDS.

Acute (å-kūt′), **formidable** (fôr′mĭ-då-b'l), **hibernate** (hī-bĕr-nāt), **luscious** (lŭsh′ŭs), **luxurious** (lŭgz-ū′rĭ-ŭs).

THE DOUGLAS SQUIRREL.



OF all the little animals that inhabit the great forests of Oregon, Washington, and British Columbia, the Douglas squirrel (*Sciurus Douglasii*) is, perhaps, the most numerous. No boy or girl who has spent a day rambling through our woods is unfamiliar with these little busybodies. They are sometimes called red squirrels, but this is not their name. The red squirrel, or chickaree, of the Eastern woods is smaller, and not so beautiful. The Douglas is about eight inches in length, and his fine bushy tail measures about six inches. He is a dark bluish-gray over his back and partly down his sides, bright buff on the belly, with a stripe of dark gray separating the two colors. He has long black whiskers, strong sharp claws, and roguish eyes that sparkle like diamonds. His food consists chiefly of nuts and cones. During the fall of the year he works incessantly from morning till night,

Reference Topics.

Size and Color of the Douglas Squirrel.

What Sometimes Called?

Habits.

Gathering Nuts.

Douglas Squirrels.

cutting off cones and robbing the hazel bushes of their treasures. These cones and nuts he carefully stores away for future use in some tree or stump, evidently mindful of the blustering, wintry days to come. He is a hard worker.

The Douglas squirrel does not seem to regard man as his enemy, as is so often the case with animals, for one can approach within a few feet of him before he scampers away. When he is truly alarmed, he scurries up a tree with wonderful rapidity; then perches himself upon a high limb, his tail curled over his back, and gives the intruder a severe scolding for disturbing the quietude of his sylvan home.

Being very nimble and muscular, he performs marvelous acrobatic feats with the utmost ease, gliding up and down and around the rugged fir and spruce trunks, leaping from one tree to another—now on the ground, now in the topmost branches, and chirping and chattering until the woods ring with his music. He has a peculiar bark—a sort of *bur-r-r*, *bur-r-r*, which he utters usually when disturbed, or when he apprehends approaching danger.

A hunter frequently locates deer by hearing the squirrels barking at them as they move about through the thickets. The flesh of the Douglas squirrel is not palatable, as it has a strong, piny

flavor, which is highly disagreeable. Therefore, the true sportsman passes him by. Hawks and wildcats, however, make him their prey whenever an opportunity for doing so presents itself; but he is usually so watchful that he escapes the keen claws of his enemies.

Prof. John Muir, in his admirable book, "The Mountains of California," relates the following of the Douglas squirrel:—

"One calm, dreamy, Indian summer morning, when the nuts were ripe, I was camped in the upper pine woods of the south fork of the San Joaquin, where the squirrels seemed to be about as plentiful as the ripe burs. They were taking an early breakfast before going to their regular harvest work. While I was busy with my own breakfast, I heard the thudding fall of two or three heavy cones from a yellow pine near me. I strolled noiselessly forward within about twenty feet of the base of it to observe. In a few minutes down came the Douglas. The breakfast burs he had cut off rolled on the gently sloping ground into a clump of ceanothus bushes; but he seemed to know exactly where they were, for he found them at once, apparently without searching for them. They were more than twice as heavy as himself; but after turning them into the right position for getting a good hold with his long, sickle teeth, he managed to drag

them up to the foot of the tree from which he had cut them, moving backward. Then, seating himself comfortably, he held them on end, bottom up, and demolished them with ease. A good deal of nibbling had to be done before he got anything to eat, because of the lower scales; but when he had patiently worked his way up to the fertile ones, he found two sweet nuts at the base of each, shaped like trimmed hams, and spotted purple like bird's eggs. And notwithstanding these cones were dripping with soft balsam and covered with prickles, and so strongly put together that a boy would be puzzled to cut them open with a jack-knife, he accomplished his meal with easy dignity and cleanliness, making less effort apparently than a man would in eating soft cookery from a plate. Breakfast done, I whistled a tune for him before I went to work, curious to see how he would be affected by it. He had not seen me all this while; but the instant I began to whistle he darted up the tree nearest him, and came out on a small dead limb opposite me, and composed himself to listen. I sang and whistled more than a dozen airs, and as the music changed, his eyes sparkled, and he turned his head quickly from side to side, but made no other response. Other squirrels, hearing the strange sounds, came around on all sides, also chipmunks and birds. One of the birds, a handsome speckle-

breasted thrush, seemed even more interested than the squirrels. After listening for awhile on one of the lower dead sprays of a pine, he came swooping forward within a few feet of my face, and remained fluttering in the air for half a minute or so, sustaining himself with whirring wing-beats, like a humming bird in front of a flower, while I could look into his eyes and see his innocent wonder. By this time my performance must have lasted nearly half an hour. I sang or whistled 'Bonnie Doon,' 'Lass o' Gowrie,' 'O'er the Water to Charlie,' 'Bonnie Woods o' Cragie Lee,' etc., all of which seemed to be listened to with bright interest, my first Douglas sitting patiently through it all with his telling eyes fixed upon me, until I ventured to give the 'Old Hundredth,' when he screamed his Indian name, *Pillillooeet*, turned tail, and darted with ludicrous haste up the tree out of sight, his voice and action in the case leaving a somewhat profane impression, as if he had said, 'I 'll be hanged if you get me to hear anything so solemn and unpiny!'

"This acted as a signal for the general dispersal of the whole hairy tribe, though the birds seemed willing to wait further developments, music being naturally more in their line. What there can be in that grand old church tune that is so offensive to birds and squirrels, I can't imagine.

"A year or two after this High Sierra concert, I was sitting one fine day on a hill in the Coast Range, where the common ground squirrels were abundant. They were very shy on account of being hunted so much; but after I had been silent and motionless for half an hour or so, they began to venture out of their holes and to feed on the seeds of the grasses and thistles around me, as if I were no more to be feared than a tree stump. Then it occurred to me that this was a good opportunity to find out whether they also disliked 'Old Hundredth.' Therefore, I began to whistle, as nearly as I could remember, some familiar airs that had pleased the mountaineers of the Sierra. They at once stopped eating, stood erect, and listened patiently until I came to 'Old Hundredth,' when, with ludicrous haste, all of them rushed to their holes and bolted in, their feet twinkling in the air for a moment as they vanished."

BLACKBOARD WORDS.

Ludicrous (lū'dĭ-krŭs), **chipmunk** (chĭp'mŭnk), **ceanothus** (sē-ă-nō'thŭs), **balsam** (bạl'sam), **scurries** (skŭr'rēs).

The Kingfisher.

THE KINGFISHER.

THE kingfisher (*Ceryle alcyon*) is a bird of brilliant plumage, and, like the majority of birds which nature has clothed in showy colors, it has a shrill, rasping voice—a grating laugh—that is often heard to break the silence of our western woods. It has been aptly called the "Lone Fisherman." The plumage of the kingfisher is compact and oily, being almost waterproof, as the habiliments of such a daring fisherman needs must be. The wings are quite long, and are sharply pointed, and the bill is longer than the head. The legs are unusually short, and are set well back on the body. There is a crest of feathers on the top of the head, similar to that of a blue-jay, which the bird raises and lowers, particularly when irritated by some intruder. This bird lives a secluded life. It loves quiet haunts in little coves, and by the deep, still pools of creeks and rivers. It is a born fisherman, and one that

Reference Topics.

Describe the Habits of the Kingfisher.

How Do They Catch Fish?

What Name Did the Ancients Give Them?

Give Some of the Superstitions Connected with Them.

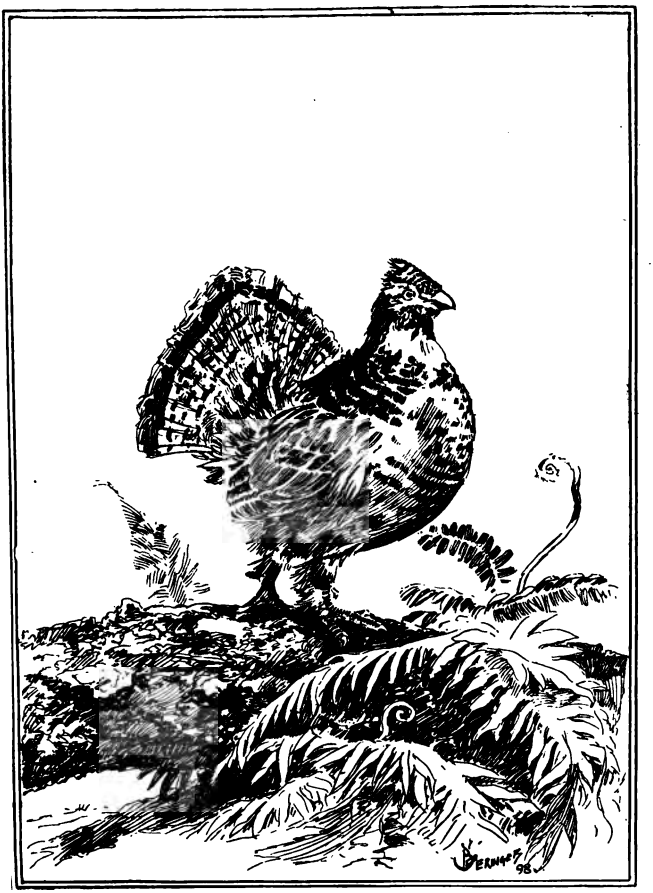
is very expert, as you will discover by watching it closely. On a branch overhanging some pool in which the young fish love to play, it will perch itself, with keen eyes, intently scanning the water below. Suddenly, with the speed of an arrow, it dives downward, with outstretched wings, often completely disappearing for an instant, when it will fly back to its perch with a trout wriggling in its beak. Being unable to swallow its victim while such a struggle for freedom is going on, the fisherman kills it by a succession of sharp raps against the limb, after which the victor swallows it whole, and with evident relish. So adroit is the kingfisher that it frequently gives the fish a fling from the water into the air, and catches it again before it reaches the surface of the pool. While fish is the principal food of this bird, it also lives upon different kinds of insects, shrimps, and even small crabs. Kingfishers make their nests by burrowing horizontally into some dry sand bank to a depth of five or six feet. The entrance to the hole is just large enough for the access of a single bird, but the extremity is sufficiently roomy for the birds to care for their brood. At times they will use the deserted home of a water rat, and save themselves the labor of digging a miniature tunnel. The nest proper is built of twigs and grass, lined with fish bones. In this is laid the five white, glossy eggs. The young

birds are watched over with great care by the parents. The same nest is used year after year.

The kingfisher is probably connected with more fables than any other bird. Under the name of "halcyon," it was said, by the ancients, to build its nest on the surface of the sea. It was also believed that a dead kingfisher, when suspended by the throat, would turn its beak to the exact point of the compass from which the wind blew. Its dead body was thought to avert thunderbolts, and it was supposed to possess many marvelous virtues. Even to-day there are places in France where the kingfisher is called the "moth bird," as its body is said to keep moths from woolen garments.

BLACKBOARD WORDS.

Halcyon (hăl'sĭ-ŏn), **plumage** (plūm'āj), **brilliant** (brĭl'-*yant*), **compact** (kŏm-păkt'), **adroit** (å-droit'), **habiliments** (hå-bĭl'ĭ-*ments*).



The Ruffed Grouse.

THE RUFFED GROUSE.

THE ruffed grouse (*Bonasa umbellus*) inhabits the entire wooded districts of Oregon and Washington. It is particularly distinguished from other species of the grouse family by its *drumming*—a sound the male bird produces by beating its wings against its sides, slowly at first, then with increasing rapidity, until the listener is almost led to think he hears the rumble of distant thunder. Some people believe the bird strikes the log on which it is standing with its wings, thus making the drum-like noise. This is a mistake. A recent writer on this subject says:—

"One day, knowing where a drumming-log was, I made up my mind to watch the bird and see for myself exactly how the drumming was accomplished. Accordingly I went, when all was still, and climbed a low, thick spruce within a short distance of the log. My efforts were soon rewarded by seeing the

Reference Topics.

- Describe the Drumming of the Ruffed Grouse.
- Where is It Usually Found?
- The Color of the Eggs.
- The Food.
- Scientific Name of Ruffed Grouse.

grouse coming, now advancing, now retreating. Finally he came to the small end of the log and slowly marched along. After some time he came to a smooth place, when he raised his neck, as a cock does in crowing, and gave two long, measured flaps against his sides. Then, striking at first slowly with his wings, he gradually increased the speed until the noise became a booming roar."

The sound made by our drummer lasts for several seconds, and is repeated at short intervals. It is very difficult for one not accustomed to hunting the bird to locate him, or, in fact, tell from what direction the noise comes, especially if the grouse is some distance away, as they can be heard half a mile or more. The grouse begins his drumming in the spring of the year, usually early in April, and he is heard just after sunrise and in the edge of evening. Some time in May the female selects a thicket, or the side of a log in a dense part of the forest, for the location of her nest. This is formed by collecting a handful of withered leaves or ferns from the surrounding ground. The eggs, of which there are from ten to fifteen, are of a dull yellowish color. The young grouse are very active almost as soon as they are hatched, and make use of their little wings when they are a week or ten days old. The mother leads them about in search of food, and broods them at night beneath her

wings, as a hen will do. She will sacrifice her own life in defending them from the claws of the wild-cat or cougar. I remember when I was following a path, some years ago, through the lowlands of the Puget Sound country, I suddenly came upon a mother grouse with her brood of little ones. She gave a shrill cry, more like that of an animal than a bird, at which the young ones scattered like so many brown leaves in an autumn gale, and were quickly hidden from my sight. The mother, however, confronted me with all the daring of a lion. Her mouth was open, her wings outspread, and the fire flashed from her eyes. I really think she was the most infuriated creature I ever saw. She was determined that I should not harm her young, and when I took a step toward her to ascertain whether or not she would fly, she advanced to meet me, uttering her peculiar cry. Not wishing to intrude further upon this happy family, I stood still. After a few moments the mother bird flew into a neighboring thicket, and as I passed on I heard her calling her children together.

During the summer these grouse are seen dusting themselves in the roadways and along the edges of the fields. Before rising to fly they sometimes utter a sharp *quit, quit!* and they fly with great swiftness, their wings making a whirring sound as they go. They are usually found in the lowlands along the

banks of lakes and rivers. They love to perch on mossy logs in the deep, cool, twilight woods, and are seldom seen on the barren highlands, as is the case with other species of the grouse. Their food consists of various berries and seeds. They are especially fond of huckleberries, with which our woods abound. The general color of the ruffed grouse of the Northwest is a light shade of brown, at times almost hazel, and is barred with yellowish white, particularly on the breast. The lower part of the back is a more even brown. The male bird has a ruff of black feathers around the neck, which presents violet reflections. The flesh, especially that of the breast, is considered a great delicacy; but the true lover of nature would rather forego the pleasure of feasting on this beautiful bird, and leave him unmolested, to break the deep solitude of the forest with the long roll of his drum.

BLACKBOARD WORDS.

Barred (bärd), **sacrifice** (săk'rĭ-fīz), **species** (spē'shēz), **peculiar** (pē-kūl'yēr), **delicacy** (dĕl'ĭ-kȧ-sy).

THE CLAM.

NO part of our great emerald land offers a more interesting field to the young naturalist than the beaches of the Pacific and Puget Sound. Every rock along these shores is covered with living things, and innumerable creatures find homes amid the sands and pebbles. Strange shells are to be found everywhere; and, as the tide leaves the beach wet and glistening in the sunlight, you will see the little crabs running here and there about your feet, hiding themselves for an instant behind the stones, then scampering sidewise toward the ebbing water, as though they were urgently needed there.

Clinging to the sides of the ledges and the wave-washed roots of the firs and cedars, you see the starfish of various colors, some looking at a distance like a great heap of gold. Dwelling in company with the starfish are the mussels and barnacles, whose sharp-edged shells the bare-

Reference Topics.

Where Do Clams Live?

The Food of the Clam.

The Shell.

Describe the Different Kinds of Clams You Have Seen.

The Clam.

foot boy has good reason to dread. The tangled seaweeds teem with countless numbers of curious inhabitants.

Perhaps the most interesting and best known of all the mollusks to be found along our shores is the clam. Probably no one who has camped upon the beach during the delightful days of summer has not become well acquainted with this strange shell-fish. Gathering clams is a pleasure enjoyed by the great majority of our young people, and the older ones as well.

The clam and his brother, the goeduck, live side by side, at a depth of two or three feet beneath the sandy flats. When the tide is well out, you will see little jets of water, like miniature fountains, come spurting up into the air from small holes in the sand. By watching these fountains one is told the exact location of the clam, which is often obtained only after hard digging with a spade or shovel, the implements commonly used in securing them. The Indians use a curved stick of hard wood, nicely polished.

The two shells of the clam are joined together at the back by a hinge. Often this hinge is merely a straight line where the two valves or parts of the shell come together, and are fastened by a strong ligament; but frequently there are several hinge teeth on each part, which fit into each other, allow-

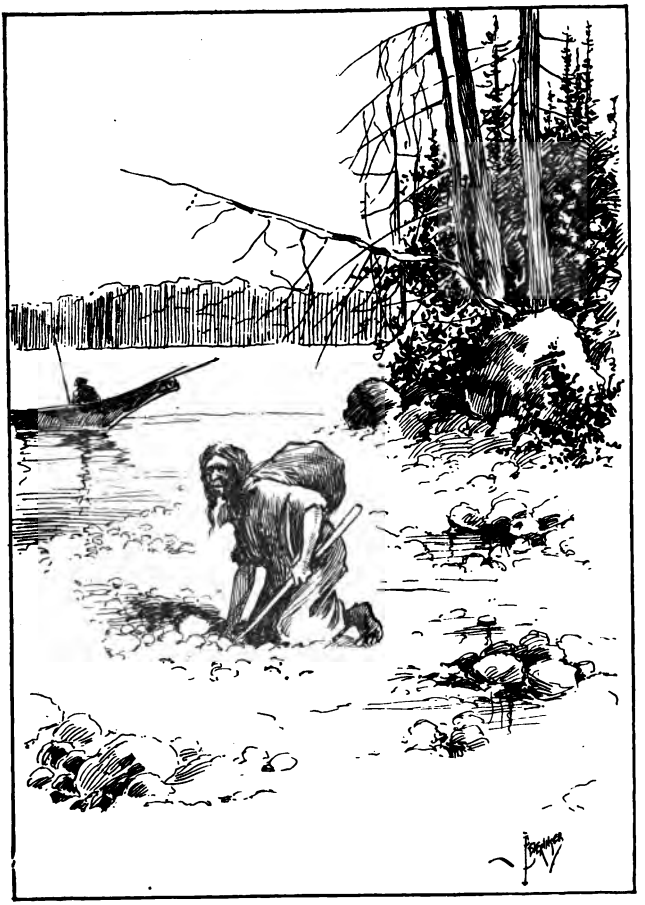
ing the shells to move in but one direction. These are known as *cardinal teeth.* The two valves are drawn together by two strong adductor muscles, which run from one to the other, and which are firmly fastened to the shells. These muscles, of course, have no difficulty in holding the two valves together, but they cannot open them again, as they do not possess the power to push. Therefore a strong spring acts in opposition to the muscles. This spring, called the ligament, looks like India rubber, being dark, tough, and elastic. This becomes very brittle when dried, but is exceedingly strong when the clam is alive. The valves are lined with a soft skin, known as the *pallium*, which wholly hides the substance of the shell, forming new matter at the edges, and thickening the inside. A clam has gills, a liver, heart, and digestive organs. The heart is a sack-like organ, and the liver is large and dark-colored, and is separated into granules. There are four gills, two of which are on each side of the body. They are quite similar in appearance to tiny ribbons, and are joined together by their edges. Numerous tubes cross them, through which the blood circulates. The gills act as blood purifiers, and are also the food gatherers. The clam gets its food from the surrounding water. The surface of the gills is covered with fine hairs. These the clam keeps moving, thus

creating a slight current in the water. The fresh water flows into the space around the gills, and the old supply is being forced out all the time. This circulation keeps the blood pure, and the gills catch the thousand minute organisms afloat in the briny deep, and on which the mollusk subsists. So every time the tide is in, the clam is supplied with food, and is in no danger whatever of being dug up and made into chowder. Therefore we see the meaning of the common expression, "As happy as a clam at high tide!" It is often asserted that the clam is powerless to sink itself into the sand only as the sand is washed over it by the movement of the waters, but such is not the case. The clam can dig, but in a very, very slow manner. This is accomplished by a muscular organ called the *foot*, which the clam extends down into the sand, and which, by strong pulling, draws the shell after it, little by little. To see how this feat is performed, a clam may be put into a jar of sea water, which has sand in the bottom. It will be seen that after awhile the shell is completely buried.

There are many species of the clam on the Pacific Coast. The largest of all—the great Washington clam—bears the scientific name of *Schizothærus Nuttalli*, pronounced Shi-zo-the-rus Nut-tall'i.

BLACKBOARD WORDS.

Adductor (ăd-dŭk'tĕr), **barnacles** (bär'nâ-k'ls), **granules** (grăn'ūls), **ligament** (lĭg'â-ment), **organisms** (ôr'gan-ĭz'ms).



Digging for Goeducks.

THE GOEDUCK.

BY C. M. DRAKE.

It is the largest clam on the Pacific Coast of North America, if clam it may be called, and I know you would like a big piece of its breast nicely fried.

"The breast of a clam! where is it?" I think I hear you say.

Just below its neck, of course, and good, thick meat it is—somewhat sweet, but very tender and delicate in flavor, and often more in quantity than you would care to eat at a meal, for our friend the goeduck has been known to weigh eight or nine pounds. The dictionaries call this mollusk the "geoduck;" but dictionaries are not always right, and those who live on the shores of Puget Sound would laugh at you if you called it the geoduck. Its scientific name is *Glycimeris generosa*. *Glycimeris* means "bitter-sweet," because of its taste, and the other word is kin to our generous, genus, etc. It has a cousin on the Atlantic side, whose name is

Reference Topics.

Where Does the Goeduck Live?
Its Method of Obtaining Food.
The Shell.
What Parts Not Wholesome?
Compare the Two Kinds.

Glycimeris siliqua, and not very long ago it was thought that the latter, whose shell is black, had no near relatives living, but that was wrong, for there are two kinds on Puget Sound, only their shells are white and look like porcelain on the inside. The goeduck lives in the sand or gravel, where it is seldom or never uncovered by the water, so you must go at very low tide if you want to dig it. It has a very long neck, which reaches up a foot or two through the sand, and in its neck are two tubes, through one of which it sucks the water with the tiny animals and bits of seaweed on which it feeds, and then the strained water is spouted out of the other tube. When the tide has left its mouth bare, and you disturb it, it may spout some water up in your face as you lean over to look at it. Or it can force the water through its body below its shell, thus helping to bury itself a little deeper in the sandy bed, which it never leaves. Many people suppose it begins to dig down deeper when you try to take it up, but it only pulls its long neck closer to its shell, which may be as deep as two feet below the surface of the ground. As you dig, the sand keeps caving in the hole, so it is no easy matter to dig a goeduck up, and even if you do at last get near enough to pull it out by grasping its neck, you will be lucky if you do not break its fragile shell. The shell is not nearly large enough to cover

its body, gaping very widely at both ends and in front. The edges are very thin, and a skin grows fast to them and covers the breast and neck of the goeduck. This skin is quite tough, and you can pull it off somewhat like you can skin an eel. At the hinge of the shell are some long, curved teeth, which keep the two shells in place when they close nearer together, and they also help support some soft parts of the body. These teeth break very easily, so easily that the animal sometimes breaks its own teeth. But then they grow again.

The goeduck eats two meals a day, and gets very fat upon what the incoming tide brings it. After it has taken out what it wants from the food it sucks in through its long neck, the refuse is thrown out with the water through the other tube in its neck. When we eat clams and oysters we think nothing of swallowing the whole animal, but should we do so with the goeduck it might make us sick, for the contents of its large stomach is not wholesome; but all the rest of its body is good food, even to the long, muscular neck, which is as tough as beefsteak.

Goeducks are found from Alaska to Mexico, but the southern specimens are fewer in number and smaller in size. The sandy beaches of Puget Sound seem to be their favorite home, though they are not very common even there. Not all of the long

necks which reach up through the sand belong to the goeduck. There are thousands of the great Washington clam, who rivals the goeduck in size, and whose nose looks so much like the goeduck's that it is hard to tell them apart. But you will often find moss and barnacles growing on the nose of the Washington clam, while such is not the case with the goeduck. Like all other clams, our goeduck grows from an egg, and has a father and a mother. There are hundreds and hundreds of eggs, too; but then there are so many enemies that it is no wonder the young goeducks who escape them all and at last bury themselves in their sandy, life-long homes are very few. The young shells are so very tender that they are almost no protection at all; but when the infant goeduck is buried several inches in the sand, with only the end of its neck exposed to attack, it is pretty safe. Even if something does bite off the end of its neck, that will grow again. How long will a goeduck live? I do not think anyone knows that. It surely lives many, many years, if it is not found by some clam-digger who knows how good it will taste for supper. For even the rancher's hogs, who will dig out many of the Washington clams, from a foot or more down in the sand—even the hogs get tired when they try to dig up the deeply-buried goeduck, and only the long arms of the octopus could reach far enough

down the hole to suck the goeduck out of its shell. But the octopus loves to hide among the rocks, and so the goeduck is quite safe under the sandy flats.

Every year the goeduck adds to the thickness of its shell from the inside, and builds out a little farther on its edges. Every time it grows bigger it builds just below and beyond the last growth, and makes those ridges we notice on the shell. Nearly all shells show these lines of growth, and if it grew only once a year we could tell the age of the goeduck by counting the wrinkles on its shell; but it makes new lines many times a year when it is young.

I have said there are two kinds of goeducks in Puget Sound. The less common kind lives in gravel, does not burrow so deep, has a thicker and much rougher shell, is not so good to eat, and varies in other ways from the one best known. The place where it lives has, after many years, altered its shell, its form, its habits, though perhaps not enough to make us call it another species.

BLACKBOARD WORDS.

Goeduck (commonly called go'e-duck; given as jĭ'o-duc in dictionaries), **porcelain** (pôr'sĕ-lĭn), **octopus** (ŏk'tō-pŭs), **mollusk** (mŏl'lŭsk).

THE FISHERMAN.

To-day my inland, fir-enshadowed sea
In such untroubled slumber lies below
The fire-filled dome of azure, that her slow,
Soft breathing scarce breaks the tranquility
Of her broad, burnished breast. There comes to me,
From where the beach gleams like a drift of snow
High-flung against a wall of green, the low,
Caressing tongue of far-off Italy;
And, through dark boughs, I see strong fishermen—
Black-browed and swarthy—toiling with all might
At dripping net; I see the flash of oar,
The silvered mass imprisoned there, and then
A sudden flood of vivid, burning light
Poured out upon the slanting, sandy shore.

THE SEA OTTER.

THE sea otter (*Enhydris marina*) is found along the coast of Washington, from Gray's Harbor northward to Cape Flattery, although Saanach Island, Alaska, is a more noted hunting ground. The sea otter has a large body, a small head, short legs, and a short, stumpy tail. The hind feet are webbed, and are quite large. The fur, superficially, is a silvery gray, but close to the body it is brownish black in color. This animal attains its full growth at the age of five years, though the fur is in good condition at two years. The food consists of clams, fish, mussels, crabs, and tender kelp. It lives mostly in the water. Occasionally it is seen on sea-washed rocks, and on island shores. In habits it resembles the seal more than the otter. Anyone who is fortunate enough to secure the sea otter has a prize indeed,

Reference Topics.

Where Found?

Describe the Method of Hunting Sea Otter.

Valuation of the Sea Otter's Skin.

Where Frequently Purchased?

The Sea Otter.

as the skins are worth from two hundred and fifty to five hundred dollars each. To capture one, however, is a highly difficult matter. For the purpose of hunting the sea otter, the traveler along the Washington coast above Gray's Harbor will see erected, at intervals of a half mile or more, what are termed "lookout houses." Each of these merely consists of three long timbers, forming a tripodal structure, the ends of which are planted firmly in the sand of the beach, this being accomplished when the tide is out, and on the tops of which is placed a small, box-shaped house. One of the legs of this huge tripod—if such it may be called—serves as a ladder, by the aid of which the hunter ascends to his place of concealment. After secreting himself in his queer little house that overlooks the breakers, he thrusts the barrel of his great, heavy rifle through a hole in the seaward side of the big box—for this it really is—and watches to catch a glimpse of a sea otter sporting amid the foamy waters. Days may pass, and, despite his watchfulness, no otter shows itself; then suddenly, when the hunter has almost lost hope of ever seeing one, a black head appears for an instant along the side of a breaker, and is gone. He must shoot during the few seconds in which the animal remains in sight, or perhaps pass another unsuccessful vigil. It is quite probable

that his bullet will miss its mark, owing to the prevailing winds, which turn a ball from its course, and also to the great difficulty in judging distance accurately on the water. It therefore requires wonderful skill to be a successful otter hunter. The Indians living along the coast are, no doubt, more skillful than the whites, as from boyhood they have hunted the otter. Years ago an Indian named "Copalis Jim" built a "lookout" house on the top of a great rock called Copalis Rock, that stands north of Gray's Harbor. The house still clings to the rugged ledges, and affords an excellent hiding place for the ambitious hunter.

The skins of sea otters are also purchased in China, where they are worn as badges of distinction by high functionaries.

BLACKBOARD WORDS.

Kelp (kĕlp), **tripod** (trī′pŏd), **Copalis** (co-pā′lis), **functionaries** (fŭnk′shŭn-ā-rĭz), **superficially** (sū-pĕr-fĭsh′ally).

RHODODENDRON BELLS.

BY ELLA HIGGINSON.

Across the warm night's subtle dusk,
  Where linger yet the purple light,
And perfume of the wild, sweet musk,
  So softly glowing, softly bright,
Tremble the rhododendron bells,
The rose-pink rhododendron bells.

Tall, slender trees of evergreen,
  That know the winds of Puget Sea,
And narrow leaves of satin sheen,
  And clusters of sweet mystery—
Mysterious rhododendron bells,
Rare, crimson rhododendron bells.

Oh, hearken—hush! And lean thy ear,
  Tuned for an elfin melody!
And tell me now, dost thou not hear
  Those voices of pink mystery—
Voices of silver-throated bells,
Of breathing rhododendron bells?

The Rhododendron.

THE RHODODENDRON.

THE rhododendron is the State flower of Washington. The Greeks called it the rosebay, and it belongs to the heath family of plants. This shrub has evergreen leaves and beautiful bell-shaped flowers. The varieties found in the Northwest are of various colors, and in the Cascade Mountains there is a rhododendron bearing snow-white flowers. The varieties of this shrub are numbered by the hundreds. In beauty of form and foliage, its many colors, and the profusion of its flowers, no other shrub equals it.

Rhododendron, of the order *Ericaceæ*.

Flowers: in close terminal clusters, from large scaly-bracted buds: corolla bell-shaped, five-lobed, and often irregular; ten stamens, usually bent downward; anthers short, opening by terminal pores: pod, five-celled, five-valved, and many-seeded.

They are exceedingly hardy, and can be taken up at any time without injury to them. Even while they are in full bloom they may be lifted and used for decorative purposes, and again planted without showing in the slightest the effects of being disturbed.

BLACKBOARD WORDS.

Rhododendron (rō-dō-dĕn'drŏn), **corolla** (kō-rŏl'lȧ), **stamens** (stā'mĕns), **foliage** (fō'lĭ-āj).

ANALYSIS.

In the study of flowers, have the children find out for themselves as many interesting things as possible. The following analysis will be helpful for the systematic arrangement of facts: —

1. **Root:**.....
2. **Stem:** (*a*) Class.....; (*b*) Character.....;
   (*c*) Direction.....; (*d*) Height.....
3. **Leaves:** (*a*) Arrangement.....:
   (*b*) Kind.....; (*c*) Form.....;
   (*d*) Margin.....
4. **Inflorescence:**.....;
5. **Calyx:** (*a*) Color .....; (*b*) Form.....;
   (*c*) Attachment.....
6. **Corolla:** (*a*) Color.....; (*b*) Form.....;
   (*c*) Attachment.....
7. **Stamens:** (*a*) Number.....;
   (*b*) How united.....; (*c*) Attachment.....
8. **Pistil:** (*a*) Number.....; (*b*) No. of cells.....
9. **Ovary:** (*a*) No. of cells.....; (*b*) Attachment.....
10. **Fruit:** (*a*) Kind.....

DRAWINGS.

Class:..... **Family:**.....

Name: (*a*) Scientific.....; (*b*) Common.....

Where found:..... **Date:**.....

The Elk, or Wapiti.

THE ELK, OR WAPITI.

ELK were once found in great numbers throughout Western America, but to-day these noble animals are almost extinct. About the only region of the Northwest where they can now be found is that of the Olympic Mountains in Washington. This rugged strip of land, lying between the Pacific Ocean and Puget Sound, might be truly called the last home of the elk. The scientific name of this animal is *Cervus Canadensis.*

The male elk stands, when fully grown, about five feet in height at the shoulders, and weighs from five hundred to eight hundred pounds. His color is a rufous brown, which changes in the winter to a light gray, with large whitish spots on the haunches. He possesses a stately appearance, having slender, yet well-formed, legs, a massive, well-proportioned neck, covered with long hair, a shapely head, bearing great antlers,

Reference Topics.

Describe the Elk.
Locate the Olympic Mountains.
Habits of the Elk.

and large brown eyes that are very beautiful. It requires six years for his antlers to attain their full growth, when they measure from tip to tip about forty inches. Each elk has two teeth of pure ivory. These are molars, and are called "elk ivories." This animal is not of a savage disposition, and yet often proves a dangerous antagonist when wounded. His huge, forked antlers, powerful legs, and sharp hoofs are terrible weapons, and when angry he uses them with disastrous effect. With one blow of his great hoof he has been known to tear open a wolf.

The elk has a long, swinging trot, which breaks into an awkward gallop when he is pursued. The female is of the same form and color as the male, though much smaller, and is devoid of antlers.

During the greater part of the year elk travel about in large bands, and in the nights of September and October can be heard their clear, plaintive whistle, which in sound strongly resembles a high flute-note. They are as easy to follow through the forests as so many cattle, and were it not for their many trails the Olympic Mountains would be almost impassable. I have followed their trails for hours in the foothills, and a large band, in passing through the dense growth of salmonberry bushes which covers the valleys of the Olympics, will clear out a very good pathway indeed.

The elk are usually found in the valleys near the source of some river. In the early morning they feed on the lush grass of the bottoms, and during the heat of the day, to escape the troublesome gnats and flies, they seek the higher altitudes, returning to the lowlands as night comes on. The flesh of the elk is sweet and tender, and is even more palatable than that of the deer.

Dried elk meat is greatly relished by the Indians living along the coast of Washington, and every autumn they ascend the rivers in their canoes and spend several weeks in procuring meat for the winter months.

Lieutenant J. P. O'Neil, of the United States Army, in writing of the elk of the Olympics says:—

"A little incident that occurred at our camp near the Bisland shows that the elk in this region has not yet learned to recognize in man his most dangerous enemy. A party had been sent out late in the afternoon to procure some meat. Just across a ridge they shot an elk, and returned with some of the choice cuts to camp. Early the next morning men were sent out to bring in the meat. On the way over, near the edge of the timber, was a sleeping elk. They came back for the camera, and then awoke him. He aroused himself with a half-defiant look, turned on the intruders, and gazed until the camera snapped, then trotted off,

stopping now and then to assure himself of their intentions."

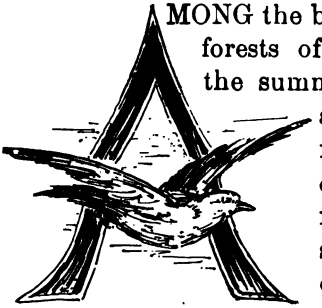
Perhaps the true name of our elk is the wapiti, and it strongly resembles the red deer of Europe.

BLACKBOARD WORDS.

Rufous (rụ'fŭs), **wapiti** (wăp'ĭ-tĭ), **proportioned** (prō-pōr'shŭnd), **gnat** (năt), **altitudes** (ăl'tĭ-tūdes).

THE RUSSET-BACKED THRUSH.*

BY R. H. LAWRENCE.



AMONG the birds that inhabit the dense forests of Western Washington in the summer season, none is probably so abundant as the russet-backed thrush (*Turdus ustulatus*); and certainly none, save the rusty song sparrow, and possibly the dwarf hermit thrush, is so fine a songster. Though the artful music of the varied thrush, the tinkling falsetto of the tiny winter wren, the briefer, quaint notes of warblers, or the fresh, accentuated songs of vireos, may often, too, be heard by the listener, the song of the russet-backed thrush stands out distinct from all these.

Possibly a few stragglers of this species remain, here or there, throughout the winter,

Reference Topics.

Describe the Russet-backed Thrush.

Locate Gray's Harbor and Quinault River.

Eggs of Russet-Backed Thrush.

Favorite Haunts.

Nest.

* Used by permission of the *Overland Monthly*.

The Russet-backed Thrush.

in protected places along the coast, but few individuals are seen till May is well advanced. At Gray's Harbor, by the first of May a few have arrived, and by the twentieth of the month the species is common. Soon its song and notes become the characteristic music of the woods.

The favorite haunts are along the courses of the streams, in the thick undergrowths that mantle their banks; here, under the moss-draped boughs of the ponderous spruces and firs, and the tapering hemlocks, is the twilight and cover it so much loves.

On the lower course of the Humptulips River, a clear, swift, mountain stream, which rises in the Olympic Mountains and flows into the harbor from the north, this thrush is found in abundance; but nowhere in all my tramps in the forests of Puget Sound and the coast was it seen in such numbers as on the banks of the Upper Quinault River. On the thirteenth of June, 1891, returning in the late afternoon from a point four or five miles up the river, to our bivouac in a diminutive clearing by the river-bank, it seemed as if at every turn of the tortuous foot-trail one or more of these thrushes flitted into the thick salmonberry bushes at either hand, and from every direction came the familiar notes and song.

Often this timid bird ventures far out into the

tall, rank fern which covers the occasional small prairies of that region.

The song of this enchanting songster forms, with its notes, a kind of background to all the bird-music of the woods. Well through the summer its rippling, joyous, at times *almost* rollicksome, song is heard at every hand, morning and evening, and at intervals throughout damp or cloudy days. Nuttall most aptly describes the caroling of this thrush as like the words, "*wit, wit, t'villia, t'villia.*" Sometimes more than two *t'villias* go at one outburst. Each following *t'villia* chases, and seems to partly overtake, the one ahead; and the notes are so rich and liquid, and the spirit of the song is so impetuous, that the listener's veins fairly tingle:—

"Thro' my very heart it thrilleth
When . . .
Silver-treble laughter trilleth."

This love song is poured out from a rather low perch, and so great is its volume that the bird's little frame seems too frail and delicate for such effort.

The low, clear whistle, variously, "*quoit,*" "*twoit,*" or "*quit,*" is to the woodsman a most familiar sound, and in the deep forest shades is really sad and plaintive. The note is slightly held. By carefully imitating it I have brought the male bird to a perch near at hand, when all attempts to stalk one in the

dense, noisy underwood and forest "trash" had failed, for the bird is generally timid and seclusive, for all its loud singing.

A low call less often heard than this sounds like, "*bah, ye-e-e-e*"; the *bah* being a clear and rather round note; the *ye-e-e-e*, a low, metallic trill, resembling, in that way, the last part of the song of the varied thrush. This call is given only, apparently, when the object of affection is supposed to be near by, the whistle, *quoit* having already drawn the two birds together.

There is a short, quick alarm-note, "*whit, whit*," or "*wit, wit*," generally at once answered by several companions not in sight.

Most of the time the bird spends upon the ground or near it. Probably its diet of insects and worms is often varied by a few berries — such as the salmonberry, for in these thickets it appears to be most abundant.

Like many of our best songsters, the russet-backed thrush is not clad in striking colors; above, "being uniformly a russet-olive; below, white; the neck, breast, and sides of its head are strongly yellowish-tinged," much and delicately spotted with olive-gray. Around the eye is a buff ring.

The nest, comfortably made, mostly of the common gray forest moss, is often built upon a loose framework of coarse straw and finer dried grass,

and in the bottom are a few layers of matted leaves, such as those of the vine-maple.

One found on the Humptulips, July second, was built in the center of a dark green forest fern, whose high-arched radiating fronds pretty well hid it till one stood over it. Another there was in the forks of a vine-maple, about seven feet from the ground. Each held fresh eggs. Usually from four to five eggs are laid, of a greenish-blue color, well spotted with several shades of brown.

BLACKBOARD WORDS.

Quinault (kwēn'awlt), **Humptulips** (hŭmp-tū'lĭps), **accentuated** (ăk-sĕn'tū-āt-ed), **vireos** (vĭr'ē-ōs), **falsetto** (fȧl-sĕt'tō), **bivouac** (bĭv'wăk), **impetuous** (ĭm-pĕt'ū-ŭs).

TO A PUGET SOUND SALMON.

BY CARRIE SHAW RICE.

SALMON of the sapphire sea,
Tell thy story now to me;
Flashing up the silv'ry streams
With thy dazzling glints and gleams,
Dancing where the water brawls,
Leaping baby waterfalls;
Marvelous thou art to me,
Salmon of the sapphire sea.

Prince in glittering coat of mail,
Salmon of the silvery scale,
Very much to know I wish
If you love the baby fish;
True, I know you point with pride
To your schools beneath the tide;
But the desks, I fear, are low,
Where the hump-backed salmon go.

Gleaming, like a thing of light,
Thro' the meshes of the night;
Hear me whisper thro' the sea:—
Spear and seine are waiting thee,
Veil thy beauties then, and flee,
But thy story leave with me;
Salmon of the sapphire sea,
Let thy story stay with me.

Washing Gold.

GOLD.

THE mining of gold is one of the industries that is claiming the attention of thousands of people living in the great Northwest. New discoveries of gold are being made in the various mountain ranges almost daily, and it is well for all boys and girls to know something of the precious metal of which they hear so much.

Pure gold is the most malleable of all metals known, as one grain can be beaten to cover fifty-six square inches—so thin that it transmits a greenish light. Its tenacity is almost equal to that of silver, and is twelve times greater than that of lead.

It is easily dissolved with a mixture of hydrochloric and nitric acids. No native gold entirely free from silver has ever been found. A lump of gold in its original state is called a nugget. The largest nugget that is known to be found was discovered in Australia, and it weighed over one hundred and eighty-four pounds, and its value

Reference Topics.

- Largest Nugget ever Found.
- What Acids Dissolve Gold?
- What is Placer Mining?
- How is Gold Separated from Quartz?
- Compare the Tenacity of Gold with That of Lead.

was forty-six thousand, six hundred and twenty-five dollars. It was called the "Welcome." All gold coins in use contain some copper, or copper and silver, as pure gold is entirely too soft to stand rough usage, and would soon wear out as money. The coin of England is composed of eleven parts of gold to one of copper, while that of France and the United States is nine of gold to one of copper.

By the use of chemicals, gold ornaments can be given various shades of color. When exposed to the air, gold will neither rust nor tarnish.

The extraction of gold from all alluvial deposits by cradle, pan, sluices, etc., is called placer mining.

The application of a stream of water from a pipe or hose is called hydraulic mining, while the use of a stamp mill for separating the gold from the rocks is known as quartz mining.

Of the three methods of obtaining gold, the last mentioned is, perhaps, followed the most by miners of the Northwest.

Gold was originally found in Asia and Africa, but the date of its first discovery is not known. It has been in use from the earliest times.

BLACKBOARD WORDS.

Quartz (kwąrts), **nugget** (nŭg'gĕt), **nitric** (nī'trĭk), **hydrochloric** (hī-drō-klō'rĭk), **alloys** (ăl-loiz), **alluvial** (ăl-lū'vĭ-*al*), **hydraulic** (hī-drą'lĭk).

DON COYOTE.

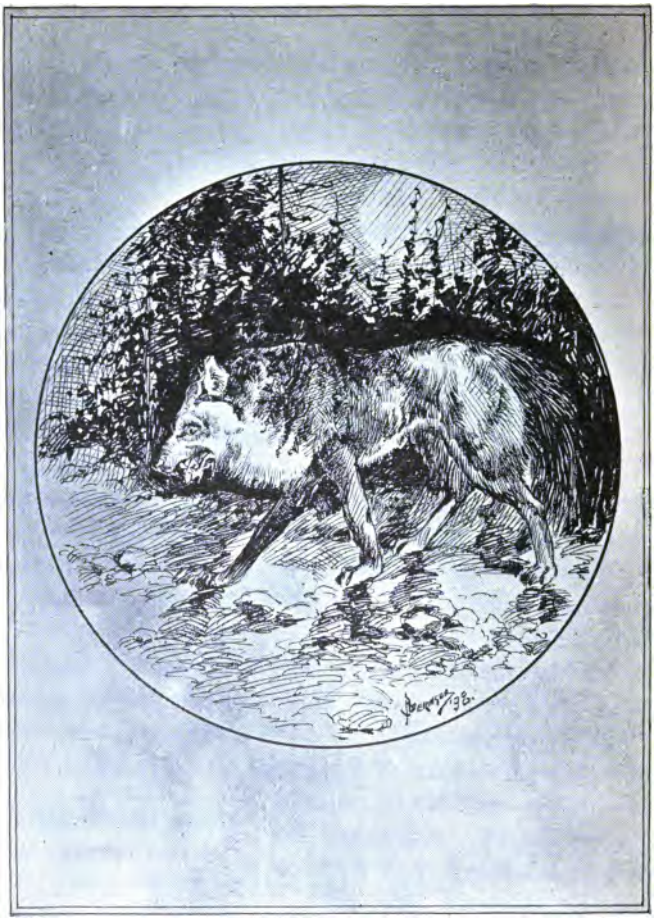
THE young folks living along the coast of Oregon and Washington know very little of Don Coyote, as he prefers the broad prairie lands to the timbered regions. A relative of the coyote, the gray wolf, or "timber" wolf, as he is sometimes called, is occasionally seen along the northwest coast, but the coyote rarely leaves the sagebrush of the plains.

Coyote is the Spanish name given to this homely, howling vagabond of the arid lands, but his scientific name is *Canis latrans.*

In size he is somewhat smaller than a pointer dog. He has a bushy tail, upright ears, a nose that is rather sharp, and thin legs. He is of a grayish color, though quite red on some parts, and along the back he is inclined to be dusky. Although he bears a strong resemblance to the dog, the two are by no means friendly, and the majority of dogs dislike him

Reference Topics.

Describe the Coyote.
Scientific Name of Coyote.
Food of Coyote.
Characteristics.



Don Coyote.

very much, and will chase him whenever they have the opportunity. This is not to say that they succeed in capturing the coyote, for his slim legs move with remarkable rapidity, and a dog has to be very fleet to overtake him. The greyhound can outrun him almost every time.

Don Coyote lives on squirrels, chickens, lambs, jack rabbits, etc., and displays great shrewdness in capturing his prey. *Latrans* means howler, and for this the coyote is particularly distinguished. Being a born ventriloquist, he can howl in such a way as to give the impression that there are several voices instead of one. Two or three of these creatures can make the night hideous with their dismal wails

The coyote has a gentle, timid face, and his appearance and manner convey to one the idea that he is a coward, and so he is, save when his life is in danger. Madge Morris Wagner, the California poetess, has said of him, that he is "born afraid," and, indeed, as he slinks away from you, the expression seems to fit him exactly. He forever yields to the temptation of stealing. He undoubtedly knows it is wrong to steal, for he is so sly with it all that he seldom gets caught. Good judgment is, in fact, one of the chief characteristics of his nature. He can thieve with a most innocent expression of countenance, and because of his shrewdness and diplo-

macy in gaining a point, the Indians of all tribes respect him greatly, and he is the subject of many of their legends. Among the southern tribes the coyote is the guardian spirit.

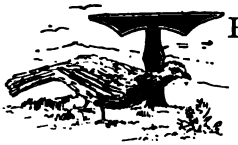
No animal of the Pacific Slope has been more written about than he. Mark Twain has described him, and Brete Harte and Joaquin Miller have told us about him in verse. In this literature, however, he is not pictured as being in league with Satan, as is the wolf in the folklore of the Old World.

The coyote lives to be about twenty years of age, providing he escapes being caught by some irate rancher and put to death for his sharp practices among the lambs or fowls.

BLACKBOARD WORDS.

Coyote (kī'ō-tē), **ventriloquist** (vĕn-trĭl'ō-kwĭst), **prairie** (prā'rĭ), **vagabond** (văg'ȧ-bŏnd), **hideous** (hĭd'ē-ŭs).

THE DUSKY GROUSE.



THE dusky grouse (*Dendragapus obscurus*) differs considerably from the ruffed grouse, both in habits and appearance. It is larger, being in fact the largest of the grouse family, with the single exception of the sage grouse, commonly called the "sage hen." The feathers on the breast of the dusky grouse are of a lead color, having a bluish cast at times, from which the bird derived the name of blue grouse in some localities. On the back it is quite dark, and on other parts of the body has rufous, mottled bars.

The nest of this bird is on the ground, and the eggs, of which there are many, are brown in color and blunt at both ends. In caring for its young, this grouse is quite like the ruffed variety, particularly in the pretended lameness the female practices to protect the young from discovery, by which the whole attention of the intruder is attracted to her ailment, and not to the little ones. These birds are

Reference Topics.

Describe the Dusky Grouse.

Habits.

Food.

General Characteristics.

The Dusky Grouse.

principally found on the highlands. They are very fond of huckleberries, and great flocks of them may be seen during the fall of the year feeding upon this fruit. They fly with great swiftness when frightened from their covert, usually alighting on the limbs of the fir or hemlock, and there often secreting themselves so carefully that one may look and look without getting a glimpse of a single bird. The male grouse is frequently called the "hooter," as during the spring months he perches himself in some high fir and utters at intervals a hooting sound like that made by blowing in the bunghole of a barrel. I have never yet met any one who has seen the bird when it produced this peculiar noise, and to even locate him in the tree is a task, as you may imagine the sound to come from any direction after listening to it for awhile.

When not disturbed too much by hunters, these grouse will often sit on a log or stump until one approaches quite close to them before they fly. In going through the woods I have had them run a few feet in advance of me for some distance, when one by one they would hide themselves behind a clump of salal, seeming almost tame enough to catch with one's hands. It is said that when the male grouse are fighting each other, hunters have caught them without the least trouble, the birds

being so intensely angry that they paid no heed whatever to the sportsmen.

The flesh of the dusky grouse is very sweet and tender in the autumn, but during the spring and winter it has a strong flavor, owing, no doubt, to the fact that the bird spends about all its time in the branches of the great fir and spruce trees, finding there nearly all of the food it eats. In midwinter the grouse is poor, and perhaps looks forward to the summer time of grass and berries with as much pleasurable anticipation as do most boys and girls.

BLACKBOARD WORDS.

Covert (kŭv'ẽrt), **secreting** (sē-krēt'ing), **anticipation** (ăn-tĭs-ĭ-pā'shŭn), **pretended** (prē-tĕnd'ĕd), **ailment** (āl'ment).

THE DRONE.

BY C. M. DRAKE.

HE began life as an egg. The egg was one of three thousand which the queen bee had laid that day. It was about the size of the head of a pin, and was stuck on the bottom of a six-sided cell of wax. It had a yolk and white, as has a hen's egg, but its shell was soft, and in form it was more pointed than that of a hen. All around this drone egg were dozens of other drone eggs, each one in its waxen cell. These eggs were kept warm for three days by the bees clustering over the cells, and then they hatched out into little wormlike creatures that we call larvæ.

There were two kinds of eggs in these three thousand the queen laid that day, and about a twentieth part of them were drone eggs. As the queen laid the eggs, she seemed to know which kind to put into each cell, for the

Reference Topics.

- What is Meant by Larvæ?
- Habits of the Drone.
- Method of Obtaining Food.
- From What is Honey Gathered?
- The Queen Bee.

"Flying out into the warm sunshine."

drone, or male, eggs had to have a larger cell than the female eggs, because the drone is larger than the worker bee, and his cell is about one fourth of an inch in diameter.

For a little more than six days our drone was a larva, and a hungry larva he was, too! Every few minutes his older sisters would give him a feed of something which he liked very much. It was made from honey and beebread, which his sisters had gathered from the flowers, and which they had partly digested in their own bodies. This food was forced from the tongue of the worker bee to the mouth of our drone larva so many times a day that he became large and fat, and from a little larva, which scarcely filled the floor of the cell, he grew in six days big enough to almost fill the entire cell.

Now our drone began to spin a silken wrapper for himself, twisting himself about as he spun, and working so hard that it took him only a day and a half to complete his garment. Now he takes three days of well-earned rest, and the next day he turns into a pupa, or baby drone. His sisters have covered the top of his cell with a waxen cap mixed with pollen, so that more air may go through it than if it were composed entirely of wax. His capping is more rounding than the ones which cover his baby sisters. It is much darker than the cappings that cover the honey. For nine days our

baby drone stays shut up in his waxen cradle. His wings, his legs, and all of his body are changing to the likeness of a perfect bee.

He feels a desire to go out into the world. He gnaws at the capping and cuts it loose around the greater part of its edge. He pushes it away and crawls out — a drone. He shakes his wings and stretches his legs. He feels hungry, but his sisters no longer stop to feed him. He smells a delicious food close by and starts in search of it. He takes a sip of honey, and feels very much better. His sisters rudely push him to one side as they pass him while doing their work. He does not like this, but does not resist them, for he is a coward — a coward all the days of his life.

The fresh air comes in to him, and its balmy softness coaxes him to the outer world. But he is afraid to go. He goes to the doorway and looks out. The outside world is large, and he fears he may get lost. He sees his older brothers and sisters flying out into the warm sunshine, and he wants to go, too. What joy it must be to fly out into that delightful air! He tries a short flight, and circles a little way above his home, coming back many times during his outing to see that he does not lose his way. He is in love with the great world of sunshine, but he is still afraid to venture out. And well he may fear, for he has enemies

watching for him. Bee martins love to snap him up, because he is meat and honey. The woodpecker and other birds eat his brothers and sisters. Even at night they are not safe. The wax moth and the mice sometimes seek an entrance into the home. The skunk patters on the outside of the hive and eats the sisters who rush to defend themselves. But the drone is safe, for he is a coward, and hides away. He has no sting, and is, therefore, unable to resist an attack. His two big eyes meet together on his head, and their many faces picture the dangers about him. His three smaller eyes help him, too, as does his wonderful sense of smell.

The beekeeper is his enemy, for the drone brings nothing to the hive, and he is a big eater of the honey his sisters gather. He does not know enough to get honey from the flowers; he knows only that the honey at home is good and belongs to all alike. Our drone is fortunate in having a pure Italian queen for a mother. In other hives the beekeeper has destroyed hundreds of drones by cutting off their heads and by trapping them at the entrance by wire traps, the holes of which are so small that the drones cannot get back into the hive.

Nature has designed our drone to become the mate of a queen bee; but where one might do this, there were thousands who could find no mate, and our drone is one of the great majority.

The spring is now drawing to a close. The honey supply is at its height, and there is an unusual stir in the hive. The bees are going to swarm. Queen cells have been built, and the hive is full of bees and unhatched brood. The queen bee is restless. A bright morning comes, and the bees make for the entrance in a body. Our drone goes along with hundreds of his brothers and thousands of his sisters. They circle about with a loud humming sound which calls many bees from other hives to join them. Then they cluster, and in a short time they are in a new home. Comb is built, honey is brought in, and new eggs are laid in the fresh cells. But the drone is no longer so welcome as formerly. The honey flow lessens, and now his sisters begin to pull him this way and that, to sting him, and worry him, and deny him food. He grows more and more timid and hides in a corner of the hive with many of his brother drones who are treated as badly as himself. His sisters are the rulers of the colony, and they have decided that there must be no more swarms, and so no more drones will be needed.

One after another loses heart and flies away to die. Our drone goes out, but returns to the home that was once his. At first he is refused entrance, but at last he slips in, and, nearly starved, goes for a feed of honey. But his time is short. In two or

three days all the drones are driven from the hive, and our drone is again out in the cold. Nearly all of his brothers are dead, but he crawls into another hive. He finds things in a sad condition there. The queen has been lost, and her subjects are hopeless. There is some honey here, but the bees are heartsick and are fast dying out, with no new bees to take their place. One day the bees from another hive find out the weakness of this colony and join in an attack. The hive is speedily robbed of its treasure, the bees, who feebly try to defend their home, are killed, and our drone is left with a few other drones in a house where there is nothing to eat. The night is cold, and they cannot keep warm. Morning finds them all dead. Our drone has lived a short four months and has been of no use to his fellow bees. He had been suffered to live this long because there was a faint possibility that he might be of use. When it was decided that he was of no possible value to his kind, he was thrust aside, broken-hearted, to die.

BLACKBOARD WORDS.

Larvæ (lär′vē), **pollen** (pŏl′lĕn), **balmy** (bäm′ў), **pupa** (pū′pȧ), **diameter** (dī-ăm′ē-tĕr), **yolk** (yōlk or yōk).

Gulls.

THE GULL.

THERE are several kinds of gulls to be seen along the northwest coast, and more than fifty species exist in various parts of the world. Among them may be mentioned the mew gull, ice gull, black-backed gull, ring-billed gull, white-winged gull, and gray gull.

This long-winged, web-footed bird is greatly admired for his beautiful plumage and flying qualities. He spends the greater part of his time winging his way over the dancing waters, for he can fly many, many miles without seeming wearied in the least. For days these buoyant lovers of the deep will follow a steamer, diving downward to the surface of the water in quest of whatever morsels of food there may be thrown overboard.

The voice of the gull is shrill and rasping, and a great number of them together, as they scream and scold each other, make it

Reference Topics.

- Name Four Species of Gulls.
- The Nest—Where Located?
- Nature of the Gull.
- Food.
- Why Protected by Law?
- Subfamily, Family, and Order.

decidedly unpleasant for the ears of the listener.

The nest of the gull is amid the inaccessible rocks or on bleak shores of remote arctic islands. The eggs are merely laid on the bare rock, though some species construct nests in small trees near the coast. The eggs seldom exceed three in number, and are deeply colored.

Soon after hatching, the young leave the nest and are carefully hidden, fed, and protected by the parent birds for several weeks before they able to provide for themselves.

The female gull is somewhat smaller than the male, though the plumage is nearly the same. The old gulls moult twice during the year, while for several years the young ones moult continually.

The young gulls keep by themselves, never associating with the older ones. Large gulls only inhabit bodies of salt water, the smaller seeking the rivers and lakes of the interior.

Gulls are most excellent swimmers, riding over the waves with perfect ease, but they cannot dive. In one respect they resemble vultures, as they will eat ravenously any kind of animal food, alive or dead, fresh or tainted. Principally, however, they subsist on fish, schools of which they follow with great eagerness. So powerful are the gastric juices in the stomach of this bird that it can digest the scales of fish and the feathers of birds. They are

not unlike cannibals, as they sometimes devour a member of their own flock that has been wounded and cannot fly. They are given to fighting among themselves over their food, and are extremely selfish and resentful.

The flesh of the gull is tough and unsavory. In most cities there is a law against shooting them, as they do good in gathering the refuse floating about the wharves.

The gull belongs to the subfamily *Larinæ*, family *Laridæ*, and order *Longipennes*.

BLACKBOARD WORDS.

Buoyant (bwoi′*a*nt), **ravenously** (răv′′n-ŭs-ly), **gastric** (găs′trĭk), **cannibals** (kăn′nĭ-b*a*ls), **refuse** (rĕf′ūs), **shrill** (shrĭl).

THE GULL.

A CEASELESS rover, waif of many climes,
He scorns the tempest, greets the lifting sun
With wings that fling the light, and sinks, at times,
To ride in triumph where the tall waves run.

The rocks, tide-worn, the high cliffs, brown and bare,
And crags of bleak, strange shores he rests upon;
He floats above, a moment hangs in air,
Clean-etched against the broad gold breast of dawn.

When wild, strong billows reach in fiercest might
To clutch the gems that fire the midnight sky,
When anger turns the ocean's face to white,
Then sounds afar his shrill, exultant cry.

Bold haunter of the deep! Of thy swift flights,
What of them all brings keenest joy to thee,—
To drive sharp pinions through storm-beaten nights,
Or shriek amid black hollows of the sea?

THE SALAL.

THE salal thrives throughout entire Western Washington, and is also found in Oregon, but it is especially thick on the hills surrounding Puget Sound. However, little is known of the plant, or shrub, as it may be more properly called, save that the majority of people are aware of its name or some name bearing a close resemblance to the correct one.

The salal (*Gaultheria Shallon*), like the rhododendron and checkerberry, belongs to the heath family. The body, or stem, of the shrub varies in size from a goose quill to a child's arm, and even larger. It is from two to eight feet in height. The bark of the salal is of a reddish brown color, while the branches, of which there is a great number, are red where exposed to the sunshine, and green elsewhere. It has evergreen leaves, oval in form, being

Reference Topics.

Of What Family is the Salal?

Color of Bark, Leaves, and Berries.

Describe the Branches.

Where Usually Found?

The Salal.

about an inch in length and nearly as wide as they are long. The upper part of the leaf is of a deep glossy green, while underneath it is pale green.

The fruit of the salal is a dark purple berry, almost black at times, which is somewhat smaller than a common black cherry. In the soft white pulp which it contains are numerous small brown seeds. The berry has a sweet aromatic flavor, not unpleasant to the taste, though, as a fruit, seldom eaten by any, save the Indians and the grouse.

The salal, when it has attained a height of several feet, and where it grows profusely, is almost impossible to penetrate without the aid of a knife. The branches are wiry and exceedingly tough, and are closely intertwined, rendering travel extremely difficult. It usually grows on highlands.

During the winter months the leaves of this shrub afford food for the elk and deer, as the deepest snows seldom cover them.

Various species of salal are to be found in different lands, but in no part of the world is it more plentiful than in the extreme Northwest.

BLACKBOARD WORDS.

Salal (săl'ăl), **resemblance** (rē-zĕm'blans), **pulp** (pŭlp), **penetrate** (pĕn'ē-trāt), **aromatic** (ăr-ō-măt'ĭk), **heath** (hēth).

Driving the Seals.

DRIVING THE SEALS.

BY DAVID STARR JORDAN.

ONE night they were all asleep on the Ungeskelligh sands, when they heard some one moving about in the mist. Holostiak awoke, sniffed, and raised his head. "That is Appollon," he said. "There is going to be a drive." Then he ran down to the sea and plunged in, and never stopped till he came to Tolstoi, so frightened was he. Here he climbed up the rocks and rushed right in among the silken-haired ones, scarcely knowing what he was doing. "The drive, the drive!" he screamed. "What do you want here?" growled Polsi; and he and Unga seized Holostiak by the shoulders and threw him off from the rocks into the sea in half the time it takes to tell it; and Matka looked up sleepily and said: "Dear, dear, how foolish these boys are! I thought Holostiak had been killed in a drive by this time. I hope Kotik will never be so silly. I am glad that Minda is not a boy."

So the drive went on, and the bachelors were all awakened from their sleep, so that they had to climb up the sands and over the hill. It was hard

work to go up hill in the sands, and they stepped on each other's feet, and tumbled about in confusion. But it was good fun for Kotik. Every minute something new would happen. Some of them would stop and shake their heads, snorting and groaning. Then Kotik would laugh at them and pretend to bite them in the throat or ribs.

When they came up from the sand over the rocks, they went along much more easily. And it was pleasant on the wet grass where the yellow poppies grow, and the great blue violets. But Kotik did not care for these; he liked the cool dew, and it was such a joke to be driven along in a crowd. But when they came to go down hill, they would slip and step on each other's feet, and roll heels over head in funny confusion. When they came to a little pond, they all plunged into it and made a great splashing.

The drive came to its end at the old killing ground, Asascardano, beside the salt lagoon, where the purple monkshood waves its poisoned flowers, and the rye grass is tall, because the bones lie thick about its roots. There were many others there from Lukanin and Zoltoi, and they all lay down in the grass, panting and pretending to bite each other.

Then Kotik saw a little "pod" of thirty that the chief had driven up apart from the rest, and

the men closed in about them in a moment, and only the biggest and smallest ones were left, for all those who were three years old, and whose skins had no scars, lay dead on the grass.

It is not pleasant to tell the story of Asascardano. If killing must be done, one does not like to hear about it. So if my lady wishes to know where her rich fur cloak comes from, she must ask someone else.

Kotik did not mind it much till his "pod" from Tolstoi was driven up. But when he saw the blows falling on his companions' heads, he was furious with wrath, and the big tears ran all over his face. He rushed at Apollon and struck at him with all his might, just as he had seen Atagh strike at old Unga. But the chief kept him off with his club, and Kotik could not reach him anywhere.

When the killing was over, and those who were left were creeping disconsolately through the grass on their way down to the salt lagoon, Kotik would not go. He groaned and shook his head, and showed all his white teeth. "He's a fine fellow; hear him growl," said the chief. "When he grows up, then look out."—*From "Matka and Kotik."*

"I wheeled about, and blazed away."

AN ADVENTURE IN THE NORTHWEST.

BY JOAQUIN MILLER.

LIEUTENANT Henderson, late of our regular army, and who was one of the rescuing party with my brother, has asked me to put on record the experience of that fearful night. I undertake the task with reluctance, because, in the first place, there is little or no instruction or moral weight in such work; and, in the second place, I recall that incident only with a feeling of horror and an unpleasant beating of the heart. However, by noting one or two peculiar phenomena of nature, a thing or two may be set down worth remembering; and by hastening over the horrible part much of the latter may be avoided.

The winter of 1862 — in which Idaho and Montana were born — was the most terrible that has ever been experienced west of the Rocky Mountains for forty years. There has been but one winter that at all approached it in length and breadth and awful battling of the elements. That was the winter of 1857, when the Indians, made desperate by hunger,

rose up one night in Pitt River Valley, butchered all the white people, and then helped themselves to the cattle.

But this winter of '62! It simply tore down mountains. To this day, as you sail up the Oregon coast, you see great gray and white blotches on the face of the black mountains fronting the ocean, where the forest was melted loose and was sent plunging by sections down into the sea. You can see how worlds are made if you note this closely, or, at least, you can see how the surface of this world was fashioned — islands along the edge of the sea, slopy little buttes in the midst of level valleys, and so on. But let us get to the black wolves.

I never saw this gaunt and hungry black phantom in the buffalo lands. I think he belongs entirely to the snow, and only crosses the Canada line when driven down by such terrible winters as this one referred to. My notion is, that the famous buffalo wolf was, or is, but little better than the coyote; better bred, because better fed, perhaps; stronger in limb and lung; but, at best, only a dog of a wolf. Anyhow, it is an insult to the whole wolf family to call a coyote a wolf. He is only an Indian dog. He is no more a wolf than is a prairie dog a canine.

But there is a gray wolf with us that even the foster mother of Romulus and Remus would not have been ashamed to acknowledge as of kin. He

is born and bred of the woods. Yes, I know you may find him in the midst of the plain, miles, hundreds of miles, away from his habitat. He will calmly sit by and let the Indian dog, the coyote, chase down a deer, elk, or buffalo, and then step in and preside, master of the feast. But no matter where you may find this long, slim, noiseless, and shadowy gray creature, he is of the woods; although, with those legs and that tail, with a favoring wind, he is more nearly a bird than a beast, and descending from his black forest retreat will land where he likes in a little time.

Strange what an influence woods have on animal life. Look at the Indian. Whenever he has been found in the woods, he has been found to be a man—a savage man, perhaps, but a man. In the open plain, however, as along these California and Nevada levels, he has ever been a beast. Wolves the same way. Dogs, too. Cut the woods away from their work of covering a nation, and that nation is not. If Rome had written, instead of that nonsense about her Colosseum, "While the woods stand, Rome shall stand; when the trees fall, Rome shall fall, and when Rome falls, the world." But now for the wolves. Only let us take care of our woods. Why, do you know what the word "Nazareth" means? I will tell you, for you cannot know it too well. It means "woods." So that, when the Christ came

and the smart men of the big city kept saying, "Can any good thing come out of Nazareth?" they were only saying before time what Boston, New York, and Philadelphia have been saying for a century, "Can any good thing come out of the woods?"

The snow had blocked the wheels of the world. The Civil War was booming and raging along the whole line of the Eastern States, and the boys in the mines, snowed in, frozen up, they wanted to know; they must know, don't you see? I had spent winters in the snows of Mount Shasta. Yes, I could and would walk from Walla Walla to Millersville, in Idaho, with a load of letters and papers on my back for the snow-bound boys. Only two hundred miles! Ike Mossman, my partner, now in Oakland, walked with me the first hundred, to Lewiston, and could go no further. A lot of men were waiting there to go with the express, as usual. They dropped behind, in fragments; and when night fell and I still kept on, the last two of the lot touched a match to the resinous bark of a tamarack that stood by the gleaming, glittering trail of snow on the mountain-side, and shook their hats and shouted in manly admiration, though they could go not a foot further.

You see, I had to cross Camas Prairie that night, eighteen miles, while the snow's crust was like steel. An hour of sun on this vast and gleaming sea of

trackless snow — it is a great wheat field now, I hear — and you would sink in the snow to your knees.

I made it without a mishap or struggle of any sort; came up to the mountain station at the base of Mount Idaho with the morning star, and awakened the men buried down there in the little cabin, ten feet under the snow, with the Modoc war whoop.

Only twenty miles more and I would be with the boys in the mines. They had been good to me, and I thanked God that I had strength and skill to serve them now. What a welcome I should receive! I was more than gold to them, as they used often to say. They had only gold for me, but for them I had the world — letters; love.

The fellows at the station took the greatest care. No, I should eat nothing at all at first; only coffee, then a crust, then beef broth and onions, meat at last; and by the great roaring fire I fell asleep as I ate, and an Indian with open palms rubbed my swollen feet and legs.

Hours, and hours, and hours of sleep, and then, half awake, lying full length with feet to the fire on the bearskins. Half awake? aye, more than wide awake as the sun settled his account with the world and went his way. I, too, must be off. My big leather bag of letters fitted me like a huge jacket; good armor against cold, bullets, wind, and — wolves?

I had a six-shooter in my left hand, and a small derringer nestled down in each flank. I had encountered nothing at all the night before to alarm me. True, a band of coyotes blocked the trail at the edge of the woods, eating some carcass in the snow; but I had gone around and saved time and trouble. I was ready to do the same now, for the old hunter who left the station told me more than once that the hard weather had filled the woods with an unusual number of strange beasts. All I wanted was to get through, deliver my letters, and receive my welcome. Oh! glorious, glorious olden days! when the thought of gold did not figure at all!

I knew my brother was waiting, never so anxiously, at the other end of the road. I knew he came out every night as far as the foot of Dead Horse Hill, three miles. I could shout to him from the top of Dead Horse Hill, a mile, and he could shout back, so that, in fact, I had only sixteen miles up and over the great black spur of Mount Idaho to make alone.

But it was hard, steep, slick as glass in places, for all this was passable, so many feet polished these icy steps by day; no one daring to try the pass by night for fear of sudden storms, in which at least a dozen men had already died right along here. It was only the dreaded Camas Prairie, now far behind me, that

cut them off so entirely from the world. For no one, not even an Indian, would cross the sea of snow by night. And no one could possibly cross it by day, as I have explained.

The snow on either side of the narrow, steep, and dark trail reached my armpits.

The bottom of this trail, and all the little benches and breaks on either side, was black from millions and billions of snow fleas. What these little creatures are, or for what, who shall say? But they, by their myriad presence, have helped many a poor fellow from suffering that one most indescribable agony—snow-blindness. For as long as the eye can rest on some dark object, the glittering lances from the snow do not pierce the eyes and drive men mad from intense pain. And this may be Nature's use for this snow flea. But how shall we explain any use for the red snow flea on Mount Shasta? They are infinitesimally smaller than the black snow fleas of the far north, and comparatively inert. You can hardly see the red flea move, while the black fleas cover and make as black as a hat the bottom of the footprint in the snow from the man who precedes you; and they remain there almost until your descending foot touches them, when they jump out in a cloud and blacken the snow all around the footprint. But come along.

I got to the top exhausted, dazed—in fact, dizzy

— from walking, climbing, corkscrewing that black and slippery serpent. My both hands were bleeding from contact with the sharp edges of the walls of snow, and I had long since stuck my pistol in my belt to surely keep the powder dry. But only three miles more and I would hail and shout above the pine tops down Dead Horse Hill, and I knew I would have answer!

I felt there was something behind me; I had not turned my head. I was too nearly dizzy already, and all my sense and strength was now in demand for the next few last miles. So I knew I had not looked back.

Now, I have met plenty of people who have felt the nearness or the coming of some person. This is not new. "Speak of an angel and he will appear" is an adage born of this, and is old, but I have never met anyone who has felt the presence of a beast. I will not dwell further on this than to say briefly that I not only knew that I was being closely followed by beasts, but I knew they were black; and I knew there were three of them; and I knew they were not down in the trail. I did not know what they were. But the one thing that most startled me was the ghostly fact that they made no noise. A dog makes a scratching sort of noise on the snow crust as he moves over it. A bear's claws will rattle like bones on the snow as he walks; all beasts,

in fact, except those of the cat family, can be heard on occasions like this. But these black and ghostly beasts were as noiseless as are the dead.

I found myself almost flying, six-shooter in hand, for the summit was in sight; and the top was almost bare of snow, swept by cyclonic tempest. I sprang on, on, up, out of my chasm of snow, and wheeled about. There they came — three — just as I had seen them. They did not stop, and I fired instantly. I do not miss my aim with a pistol. There is more than one man besides myself, however, to tell that. The gaunt, ugly beast threw his head around, snapped viciously at a companion, and then sprang twice or thrice around, rolled down, and was dead.

Then all the picture and storybooks which I had read about bears and wolves came back. I had expected to see the others tear and eat him as in the books. They did not so much as snap at him as he spun about in his death struggles. I had always seen bears and wolves with red mouths wide open in pretty picture books. The mouths of these were all as tightly shut as steel traps. Were they all males?

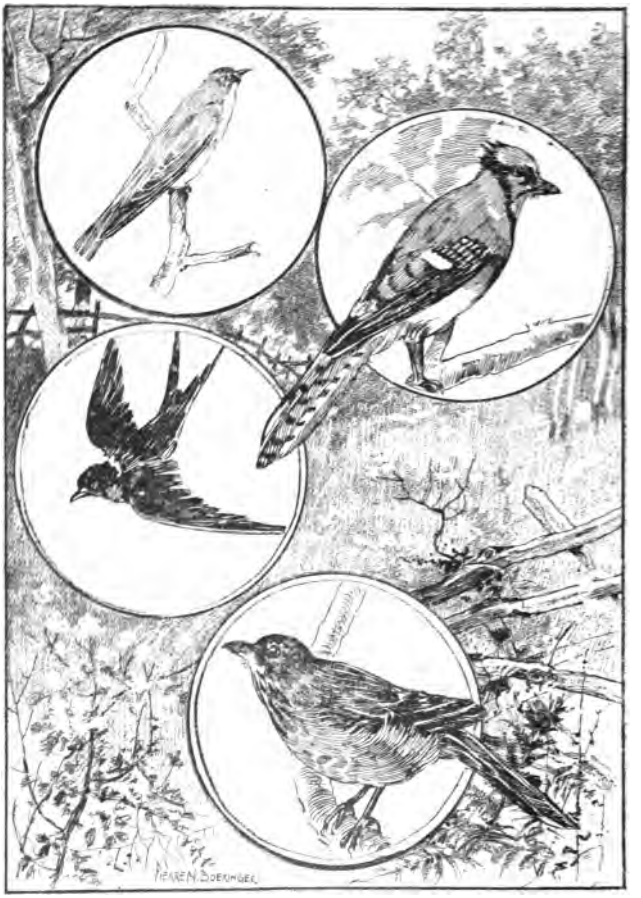
Five hundred yards more and I would be on the top of Dead Horse Hill and could be heard. I ran, I flew. I tried to shout as I ran, but, feeling my voice gone, I wheeled about, a derringer in my right hand, and blazed away. The shaggy brute fell,

but was up and on me instantly, ahead of the other one. You see my right hand is not strong or steady. Using the other, I struck him in the teeth with my six-shooter; no time to shoot now. These old pistols were a good arm indeed; better than the new ones. But you had to take time to cock them, and it took two hands to do it; and then the long barrel made the pistol useless in a hand to hand fight.

But now the horrible part of the whole story happened. The wedge which holds the pistol together by sad misfortune struck the teeth of the brute and flew out, leaving only the useless butt of the pistol in hand. The wounded wolf seized this left hand and piece of pistol in his long and bloody mouth, and held on like death. I got the other derringer out; but the other beast smelt blood, and, thrusting his nose in, I gave this brute the bullet, and he fell like a stone. Victory! for the other let go, as he could n't swallow the pistol, and I tore the air with my yells as I sprang forward and down the steep hill, till I literally fell into the arms of my brother and his friends.

Yes, they had been coming as fast as they could, had heard the first shot, and had been shouting and yelling all the time as they climbed as fast as they could up the Dead Horse Hill to meet me. But the wind was blowing, and then my heart had been beating like mad.

That is all. And if you want more of the details of this incident, write to P. W. Johnson, 34 Montgomery Street, San Francisco, who was one of the rescuing party that night with my brother. He is at the head of the Yaquina Bay Transportation Company, is entirely reliable, and probably does not find it as unpleasant to recall this ugly night as I do.



Bluebird. Blue Jay.

Swallow. Robin.

A GLANCE AT THE BIRDS.

ESPECIALLY noticeable among the various kinds of birds to be seen in our great "Emerald Land" are the blue jay, robin, blackbird, woodpecker, yellow-hammer, bluebird, swallow, crow, and meadow lark.

The blue jay is a handsome fellow, but he is given to scolding a great deal, and has a very disagreeable disposition. He is extremely noisy, save during the nesting period, when this saucy bird retires to the most secluded haunts and remains very silent, exercising great cunning in keeping the nest hidden from all intruders. The jay is a born robber—a desperado in truth, as he robs nests, kills young birds, and is generally an outlaw of the worst type. He steals fruit, too, and when the farmer was gathering his crop of potatoes I have seen him carry, by plunging his bill into it, a potato almost as large as him-

Reference Topics.

The Blue Jay.
Robin.
Blackbird.
Woodpecker.
Yellow-hammer.
Bluebird.
Swallow.
Crow.
Meadow Lark.

self. Perhaps he would fly with his burden only a short distance beyond the field, when he would drop it to the ground, and, returning, get another, and so on, until he had wasted considerable of the farmer's produce. The robin is his most desperate and watchful enemy, and will drive him away when he comes too near the family abode. The jay, unlike many of our birds, makes no regular migrations at certain seasons, but remains in his favorite locality during the entire year. The jay is usually seen in the early morning, flitting about among the topmost branches of a tree, but later in the day secrets himself amid the low shrubbery and bushes. Jays make their nests in the woods, choosing old trees, as a usual thing, wherein to build. The nest of roots and twigs is built near to the body of the tree or in the fork of two limbs. The eggs are from four to six in number, and are of a dull olive, specked with olive-brown.

The jay when domesticated has a talent for mimicry, and has been known to imitate human speech with some distinctness. Like the parrot, the jay mocks what he hears, and this quite successfully.

Our robin differs slightly from that of the far East in several respects. Its breast is not so red, and it is of a more ashy hue on its back. It has no "joyous carol," and its piping notes have a tinge of sorrow

in them. The American robin belongs to the thrush family — the "highest development of bird organization." It is larger than the English redbreast, which, while bearing the name of robin, is different from that of our land. The robin becomes quite tame and domestic, and makes its home during the spring and summer months amid the orchard trees. It loves cherries, especially, and strawberries are not passed by. This bird rears its young with great care, and watches over the little brood with no small solicitude. The nest is most frequently built upon the limb of an orchard tree, and no attempt is made to conceal it from view. It is poorly constructed, and is composed generally of leaves, old grass, and mud. The eggs are similar in number to those of the blue jay, and are of a greenish blue in color. Like the jay, too, it can be taught to imitate the sounds of other songsters. No bird is more beloved than the robin.

The blackbird is another lovable creature. He has been called "The Bird of Society," because he prefers many companions, and will stay alone with his family but a short time in the summer. He is very active, and sings from morning till night his song, which sounds something like "*conk-quer-ree-conk-quer-ree!*" A great flock of these birds can make the air ring with the music of their voices, and for pure melody some of their liquid notes

[illegible] They are fond of newly-plowed [illegible] furrows, [illegible] as they search for worms [illegible]. They make some noise in the month of [illegible] like to build their nests in low marshy [illegible] islets. The nest is deep, and is [illegible]. The eggs are of a light [illegible].

[illegible] to be found in our woods, [illegible] pre-eminence. It is a bird [illegible] with a sky of vivid crim- [illegible] is head. It is not quarrelsome, [illegible] unless they attempt [illegible] when it fights for [illegible] the enemy is a snake. In some [illegible] resembles the red-headed woodpecker, the [illegible] being almost the same. It [illegible] is a tree—a dead cedar, [illegible] with an incessant [illegible] noise resem- [illegible] drill in time. It is in this [illegible] procures its food, as the [illegible] of worms and by drill- [illegible] discovers a [illegible] which it quickly extracts [illegible] by means of the little barbed [illegible]. The claws of the [illegible] enabling it to cling

tightly to the trunk of a tree. The breastbone is quite flat, while the tail feathers are pointed and are very stiff, and act as a brace in aiding the woodpecker to pursue his usual avocation with ease and comfort. In portions of the Pacific Coast where acorns are found, this bird stores them away for future use in a remarkable manner. It drills small holes into a tree trunk, and into each drives an acorn, point foremost. The acorns fit closely in the holes, and are not easily extracted. Sweet acorns are those taken for use.

The nest of the woodpecker is from ten to twenty feet from the ground, and is formed by the two birds chiseling a circular hole into the body of the tree, until the decayed wood is reached, when the hole is greatly enlarged, being from ten to twenty inches in depth. The eggs are few in number, and are pure white.

Of all birds, the California woodpecker is the most ardent worker, and can never be found passing an idle moment.

The yellow-hammer, or high-holder, flies about from tree to tree with a measured flap of its wings, and obtains its food in the same way as the woodpecker. However, it spends a large part of its time upon the ground, hunting ants and bugs. The only sound it makes is a sleepy chirp, uttered at intervals.

The bluebird is the "sea-blue bird of March" of Tennyson's "In Memoriam." It is to be seen only in the early spring, and its coming foretells the pleasant sunny days that follow the dreary months of rain and snow. Its back and wings are a vivid blue, and one might truly think they "had brushed the skies of June." The note of the bluebird is an exceedingly merry one until late autumn, when it has a mournful strain, as if the singer were sad, indeed, to see the leaves falling to the ground. It is a lover of peace, and has a mild temper, avoiding trouble if possible. It rears two broods during the season, and even three, should the weather continue warm and dry. Boxes are often made for the birds in which to build their nests. These are composed mostly of twigs, grass, and hair. Often the hole in some old tree is taken possession of by the bluebird, and the nest is built there, hidden from the eyes of all passers-by. On a limb, close to his nesting companion, the male bird will sit and sing a joyful song, though always on the alert for a beetle or bug, that he may feed his patient little mate. Like the bluebird, the swallow is also a harbinger of spring. The swallow is, perhaps, the most graceful of all birds. It is on the wing almost constantly, skimming over the dewy fields, now wheeling high into the balmy air, then diving earthward with the rapidity of an arrow, gliding

and turning with a side-long motion, flitting here and there, until one grows weary from watching its varied flights. This bird is said to be a life-paired species, returning to its nesting site of the previous season and making a new nest a short distance from the old one. Their nests are to be found in barns and outhouses. The nest is shaped like a cup, and is formed from mud, and is lined with grass and feathers. The eggs, five or six in number, are of pure white, spotted with brown. The young swallows are devoid of the elongated tail feathers, which do not come until the bird is grown. It is considered a sign of fair weather when the swallows are seen flying high in the air. The low, twittering notes of this bird are familiar to all.

One of the most common of our feathered visitors is the crow, and he surely possesses characteristics that are most interesting. What he lacks in beauty of plumage and melody of tone he makes up in shrewdness of mind, for few birds are more cunning than the crow, or have such apparent common sense.

His food consists of frogs, lizards, etc., and he has a love for carrion only surpassed by the raven and vulture. I have seen crows along the sea-beaches feeding upon shrimps and crabs. On finding a clam he will fly high into the air with it and let it fall upon the pebbles, thus breaking open the

shell, in order that he may devour the contents. Truly this is a thoughtful proceeding for a bird, and yet it is an absolute fact.

Crows, as a usual thing, are seen in flocks of five or six, though before going to roost for the night a large number of them will congregate and make a great noise, as if discussing some most important subject. The crow is a plunderer, and will rob the nests of other birds. The hawk and the crow are deadly enemies. I have seen a flock of crows chase a hawk for hours at a time, and make it exceedingly disagreeable for the chicken thief.

The crow is a great annoyance to the farmer, and to frighten the birds away from the fields a post is dressed up to imitate the appearance of a man standing as sentinel, and called a "scare-crow."

This answers its purpose for a short time only, as the wily crow soon discovers the deception.

Crows can also be taught to speak almost as distinctly as the parrot. I remember that a friend of mine, while searching through the woods one evening for his cow, was puzzled by hearing the words, "Go 'long now! Go 'long now!" uttered at short intervals from the branches over his head. He was completely mystified for a time, when he discovered that the mysterious speaker was merely a crow. The bird had at some time probably been a pet and had left its home.

The nest of the crow is in some tree, away from the habitations of other birds. It is not hidden, and can be seen at some distance, usually being placed upon the topmost boughs. It is shaped like a deep saucer, and is built of sticks, woven with hair and fibrous roots. The eggs are from four to six, and are of a pale green, with markings of blackish brown.

Of our meadow lark, whose haunting melody is so charming, Ida A. Baker says: —

"The Western meadow lark tallies with descriptions of the Eastern bird; but he is a duplicate after the Western fashion, with all the latest improvements.

"The Eastern bird is described as extremely shy. Our bird will sit on a fence until we are within a rod of him. He and his mate nest in the prairie slough-grass, and in June bring their great, clumsy nestlings to our lawn, on the unfrequented side of the house, to feed and train.

"Here we have many curious glimpses into their domestic arrangements.

"The old birds undulate gracefully through the grass, but the young ones hop and waddle after them, chirping fretfully like spoiled babies.

"When the young birds are half grown, the order is reversed, and the nestling wanders boldly hither and yon over the lawn; and the parent bird follows, nervously reiterating its warning cry.

"They are brilliant, graceful birds. They seem to exult in the broad, open prairies, and the first sure sign of coming spring is the meadow lark's song, accompanied by the crooning of the prairie chickens.

"Though they are shy about their nesting and cautious in their training, they are bold enough in their singing. They choose a fence post, or the topmost branch of a small tree, and sing, at intervals, all the day.

"Their songs so far excel, and vary from, the meadow lark's song as described by Eastern writers, that it is puzzling to a learner, and sometimes really amusing, to compare them.

"Flagg, speaking of the meadow lark, says: 'Though perhaps not classed among our singing birds, it has a peculiar, lisping note, which is very agreeable.' He finds the notes 'shrill, drawling, and plaintive.' Simeon Pease Cheney says: 'He lacks the vocal power of the robin and oriole,' and 'his song is essentially plaintive.' To call some of the Western meadow lark's strains plaintive, is a musical joke. The accent is always marked, and the voice like a cross between a piccolo and a flute. Hear it ring out on some sunny morning, filling our vast prairie auditorium! Plaintive? One could dance to his piping.

"These and other phrases we hear from the first warm days of April until the middle of June.

Cheney's description of his manner of singing—'a phrase and pause, and phrase again, constantly alternating'—pictures the manner of our Western songster, and, as Flagg says, it is almost incessant at all hours of the day.

"But in vocal power he is fully equal to the robin and oriole. In variety of song he far excels them. His pitch is a tone or two higher than the robin's, and the quality of his voice is just as smooth and mellow.

"In his recognition of time he expresses, musically, what we hear in no other bird song. All others are either a series of short phrases, without accent, little trills, or brilliant cadenzas. But in his phrases, the accent that characterizes time is always clearly marked, making it either into triple or common time. Many of his songs would do for the first phrase of a polka or waltz, they have such an irresistible swing. Others are staider and simpler.

We notice most readily the peculiarities of songs and voices when comparing them, one with another. Early one morning I was listening to a thrush's song. It was full of turns, trills, slurs, and every musical ornament possible, like some obligato solos that depend upon the accompaniment to mark the time. Only in this case the accompaniment of a few little jargoning birds was a failure. The solo was rapturous.

"It was the second part of an obligato duet, and the beautiful contrast in their songs was worthy the attention of any musician.

"When one has thoroughly learned this style of singing as the lark's, it is startling to see the lark sailing overhead and showering down the *ting-a-ling-link-ling* of the bobolink, then to see him alight and pipe his old whistle.

"Burroughs says the meadow lark occasionally does this in the earlier part of the season, but with us it is a frequent occurrence, and old observers often think the bobolink has come, when it is only the same old meadow lark that has been singing on their fence posts all spring. Still, I think that, after watching closely, I can distinguish a plunge and dash in the meadow lark's song that the bobolink does not possess. Then, too, the meadow lark never sings as long on the wing as the bobolink, nor continues the same song after alighting. I have thought that the meadow lark might be learning new songs. A remark to that effect made to a friend evoked a hearty laugh at my expense. Yet, from the closing paragraph in Burrough's 'A Taste of Kentucky Blue Grass,' I judge that by him my remark would hardly be counted ridiculous. I frequently hear a phrase, high-pitched, shrill, and drawling, like the old song I learned in the southern part of Iowa as the meadow lark's.

"The songs that I have tried to describe differ from it so much that not until I saw the crescent-badged whistler in the act could I believe it was he.

"I have since heard these songs, winter and summer, from the tall, charred stumps in Washington villages and from the eucalyptus trees in California. On the coast, people do not waste powder and shot on anything as small as a meadow lark. There the bird is still comparatively fearless.

"But here the meadow lark is game for those who prefer their music 'baked in a pie,' and lately he is beginning to grow timid. There is less of the friendly ringing, singing in our dooryards. The thin, high-pitched whistle is more frequent.

"Whether this is the timid call of the same bird, growing shy, or a different lark, I am unable to tell.

"The Western meadow lark, in sweetness, volume, and variety of songs, ranks ahead of all, excepting the thrush, and for a true musical succession of tones, for accent, and for evident and effective choice of keys, he surpasses all. It is only strange that musicians have not noted his peculiarities. Unfortunately, he does not study effects, and his song, when he is in the mood for singing, lasts from sunrise to sunset. If it but came in the early dawn or dim twilight, as the robin's, or at long

intervals, as the thrush's, or was always an uproarious frolic, like the bobolink's, he would have received far more appreciation."

BLACKBOARD WORDS.

Cadenzas (kå-dĕn'zȧs), **polka** (pōl'kå), **jargoning** (jär'gŏning), **obligato** (ōb-lē-gä'tō), **eucalyptus** (ū-kå-lĭp'tŭs), **elongated** (ē-lŏn'gā-tĕd).

THE MEADOW LARK.

BY ELLA HIGGINSON.

WHEN the first September rain
Has gone sparkling down my pane,
And the blue has come again,
And with pearls each leaf is shaking,
Then a soft voice rises near,
Oh, so mournfully and clear
That the tears spring as I hear—
"Sweet—oh sweet—my heart is breaking!"

Gone the white mock orange sprays,
Gone the clover-scented ways,
Gone the dear, delicious days,
And the earth sad tones is taking;
But who could the spring forget
While that soft voice rises, set
Deep in passion and regret—
"Sweet—oh sweet—my heart is breaking!"

Was it only yesteryear
That I stood and listened here,
Without heartache, without fear,
For a burst of joy, mistaking

Those full, lyric notes of pain,
Mounting yet and yet again
From the meadows wet with rain—
"Sweet—oh sweet—my heart is breaking!"

I know better, lark, to-day,
I have walked with Sorrow—yea,
I know all that thou wouldst say,
And my heart with tears is aching,
When across the fading year
Thou goest calling, far and near,
Oh, so mournfully and clear—
"Sweet—oh sweet—my heart is breaking!"

GOAT HUNTING IN THE CASCADES.

BY ALLEN WEIR.

THE mountains in the State of Washington abound in wild game. In the Olympic Range there are elk, deer, black bear, jack rabbits, whistling marmots, grouse, and pheasants, besides wild animals, including cougars, wolves, wild cats, coons, fishers, martin, mink, otter, beaver, skunks, and squirrels. The streams are well stocked with fish. In the Cascade Range there appear to be no elk north of Mt. Rainier, but there are deer in great numbers (a kind of mule deer, much larger than those in the Olympics), black bears, cinnamon bears, and occasionally a silver-tip grizzly. Near the British Columbia boundary there are a few big-horn sheep; but the mountain goats are the leading game, both as to numbers and the exciting sport of hunting them. These animals are pure white in color, their winter coat being fur, several inches in length. They are a species of antelope. Both the males and females have horns, which are slender, black as ebony, curving slightly back-

Mountain Goats.

ward, much like the horns of an ibex, and from eight to twelve inches in length. A full-grown "billy" goat will weigh about three hundred pounds. A "nanny" is, perhaps, a third smaller. They have rather short legs, and short, stout, sharp hoofs. They are exceedingly wary, nimble on foot, and very hardy. They inhabit mountain steeps and fastnesses well nigh inaccessible, away up among the glaciers. When alarmed they will climb, nimble-footed as a cat, toward the highest peaks. The hunter who desires to secure a nice fat goat must make up his mind to travel with caution, keep out of sight of his game, and climb to a point above them; otherwise he is not apt to get within rifle range of the quarry. Even then, unless pierced in a vital spot, a goat will run away, as if acting as a target were the merest sport.

In October of 1897 a party of six of us went to the head of Lake Chelan, where we disembarked with our outfit of eight horses, tents, provisions, and camping outfit. We proceeded up a steep trail seven miles, to an elevation six thousand feet above the level of Lake Chelan, where we camped alongside of a beautiful little lake. We were then above the main timber line, and in an open grassy country. There was an abundance of bunch grass for the horses, and good water. We put up our tents, and had a jolly time cooking our food on a

big, blazing camp fire. The scrubby jack pines made excellent fuel. We had killed some grouse on the way, and so had fresh meat to go with our "store goods." Playing at housekeeping out of doors is fine sport, even for big boys forty years old, when all the necessary conditions are right.

Everybody in camp was stirring early on the morning after our first night out. We saddled our riding horses after breakfast, loaded our tents and camp equipage on the ponies, and traveled across a low divide into a deep valley, about a mile to the north, where we camped again near a beautiful little rippling stream. Going down the slope after crossing the backbone, we passed over a grassy slope that was frozen. It was on a hillside sloping toward the north, and had been shaded from the sun. Three of our horses lost their footing, and slid down a hundred yards or more to the bottom of the ravine. While we were laughing at the horses, seeing they were unhurt, two of the men slipped, and went sliding down in spite of themselves. It was a beautiful toboggan slide, only rather too steep for comfort. Arriving at our new camping place, we spent the afternoon fixing up for comfort. Early next morning, one other and myself started on foot to hunt goats, directing our steps toward the top of a high mountain, northeast of camp. We took along some lunch, and found it

most convenient after a toilsome climb of a few hours. Early in the afternoon we spied a couple of goats about half a mile away, on the southern slope of an adjoining mountain. We sat down and carefully planned our way, and then descended, perhaps two thousand feet, and crossed a cañon, from whence we had another steep climb for two hours or more to get above the goats. Just as we were crossing the face of the mountain, and while we were listening to the noise of loose rocks dislodged by the goats, now below us, we came in plain view of an old "billy" and a "nan," about four hundred yards away. The "billy" had seen us instantly, and the way he danced around and sniffed was comical. He was large and fat, and his long fur shook and glistened in the sun as he moved about. We had stopped, all out of breath after our exertion. The sight of this fine-looking animal was rather exciting, but, as I prepared to shoot at it, my companion urged me to desist, saying that the distance was too great, and that we could get closer. While we parleyed, Mr. William Goat kept moving toward the peak up to the left. Finally I proposed that my companion should sneak around closer to the "nanny," and try to get a shot, while I would run around on the side of the peak opposite the "billy," and try to get near him. This was agreed upon. About half an hour afterward, as I

paused to rest, several hundred yards above, the "billy" came suddenly in view, away up above me. He had crossed the peak and was coming down. He saw me the instant that I caught sight of him, stopped, threw his head up, snorted, wheeled, and started to climb again. I dropped behind a big bowlder, and the next time the goat looked around he had lost sight of me. I kept perfectly still, and enjoyed his very evident inquisitiveness. He would move back and forth, crane his neck, and peer in my direction, in vain attempts to discover what had become of me. When I had rested sufficiently to get my nerves quieted, had made a careful estimate of the distance, and raised the rear sight of my Winchester rifle accordingly, I began shooting. At the third shot the goat tumbled backward and went out of sight. I hastened, scrambling from rock to rock, until I could look over the sharp backbone that hid my game from view, and was chagrined to find that he had fallen down an almost perpendicular cliff and lodged on a narrow ledge that was utterly inaccessible. As I turned to retrace my steps, I began to realize that in my excitement I had gotten into a dangerous place. Finally, however, by backing down slowly, I managed to join my companion, who had shot at the "nanny" and missed. He was bemoaning his ill luck, and speculating upon the possibilities of getting sight of more goats

that day. The afternoon was by this time well spent, and we were both tired after such long-continued exertion. We started straight down the mountain side, and soon came in view of two more goats — this time about two hundred yards below us. I fired at one of them, and, as it bounded and tumbled, rolled and slid down, my friend shouted, "Good shot!" The other goat got away. We went down to the one I had killed, and, after dressing it and skinning out a hind quarter to take to camp, started back. By this time it was almost sundown. Judge of our surprise when, in passing around a point of rocks, we came in view of eight more goats, feeding within two hundred yards of us. Both rifles came into rapid action, and when the smoke cleared away a few minutes afterward, two of the goats were scampering across and up the opposite side of the cañon, as though they were starting for South America and had agreed to be there by morning. And the other six — well, they did n't get away. Two tired, happy hunters started to camp just at dark, after having made sure of all the game they had down. Oh, the climb! The slipping and stumbling in the darkness! We had to cross two glaciers. At last, at about nine o'clock, we saw the bright light of the welcome camp fire. As we drew near, our exultant shouts revealed to our anxious friends that we were safe. After an hour's

time spent in getting supper and telling how it all happened, we all rolled into our blankets. Next day, while we were dressing the meat and carrying it out to where we could pack it with the horses, a snowstorm came on. Another of the party killed a goat after this, and we permitted two more to run away right before our eyes—not wishing to slay more than could be used. The homeward journey, with all our goat meat, hides, and horns, was enlivened by many tales of former experiences, and by taking turns at breaking a trail through the snow that had fallen to a depth of a foot or more.

When we got back to civilization, we found ourselves heroes; but all compliments were quietly received, as though goat-killing was with us a commonplace occurrence.

THE WOODS OF THE WEST.

O woods of the West, leafy woods that I love,
Where through the long days I have heard
The prayer of the wind in the branches above,
And the musical song of the bird;
Where the clustering blooms of the dogwood hang o'er—
White stars in the dusk of the pine,—
And down the dim aisles of the old forest pour
The sunbeams that melt into wine!

O woods of the West, how oft to your shade
Have I come in the hot summer hours,
And trod the green mantle lone Solitude laid
Through the deeps of your night-haunted bowers,
And lingered beside the pure crystalline streams—
Those poets that rhyme as they run,—
And watched in the shallows the silvery gleams
Of the minnows in meshes of sun!

O woods of the West, I am sighing to-day
For the sea songs your voices repeat,
For the evergreen glades, for the glades far away
From the stifling air of the street;
And I long—ah, I long to be with you again,
And to dream in the region of Rest,
Forever apart from this warring of men,
O wonderful woods of the West!

The Wild Cat.

THE STORY OF A WILD CAT.

THE wild cat is larger than the domestic cat, and is of more powerful build. It has a short tail, and its fur is quite long. The head has a savage aspect, and the eyes are not unlike those of a cougar. It is a nocturnal wanderer, and preys upon birds and rabbits, and ofter kills and carries away many of the ranchman's chickens and turkeys. It is of a ferocious disposition, but, unless wounded and pursued with no way of escape possible, will not attack a man.

Many of these animals are killed in the woods of the Northwest, although they are extremely wary and have a very keen sense of smell.

I remember that some years ago, in company with three other youths, I was camping on the shore of Puget Sound. We had placed our tent near the beach and at the mouth of a small cañon. Near by a creek rippled through the ferns and grasses, and above drooped the broad, fan-like boughs of a huge cedar. It was an ideal place in which to camp and spend a few days of our summer vacation. We

were well armed, in fact it is amusing to me now as I think of the rifles, shotguns, pocketknives, hatchets, bowie knives, and revolvers with which we were equipped. We were out for big game, but did not succeed in getting any of it. However, we were very successful grouse hunters, often bringing into camp, after a day of weary traveling through brush and over logs, a dozen or more of these beautiful game birds. One evening, just at dusk, as we approached camp, we were startled by a shrill screech, an indescribable sound, that came from the direction of the tent. This was followed by a rattling of the tin pans left on our rudely-constructed table, and a quick rustling of the bushes. Then another screech rent the air and made us shiver slightly. We stopped and peered through the gathering dusk, in the hope of getting a shot at the intruder. But the next screech was further away up the creek, and we listened until the cry, repeated at short intervals, could no longer be heard.

"A bob cat," said Ralph; "he 's been trying to find something to eat around camp."

"You mean a wild cat?" I queried, knowing my companion to possess a world of information in regard to wild animals.

"Yes, wild cat or bob cat. Some call them bob cats, because they have a short tail. We must watch for this fellow and get him."

The following evening we arrived at the camp about the same hour, and endeavored to go more quietly. We had not gone any nearer to the tent than on the previous evening, when that awful screech was given, and the former proceeding was repeated. We were all eager to secure the prowler, but how to get a glimpse of him was a difficult matter to determine. As we sat by the fire that night cleaning our firearms, we told frightful stories of adventure in the wilderness among wild beasts, until the crackling of every twig in the darkness surrounding us was the signal for drawn knives and a hasty loading of rifles. The fire was only a heap of glowing coals when bedtime came, and one by one we retired for the night. Ralph was having some difficulty with his boot, and lingered to extract the troublesome tack. A boy who has tramped all day long with a gun on his shoulder is not apt to lie awake on his bed of aromatic fir boughs, and I was asleep almost as soon as my head had touched the pillow. I was suddenly awakened by a shout, and rose to a sitting position instantly. "Give me that gun!" Ralph exclaimed, thrusting his head through the tent door.

I gave him the shotgun, and he withdrew and remained silent. I expected him to shoot. The other boys were also breathlessly awaiting the report of the gun.

"Oh, it 's gone now!" Ralph said, entering the tent.

"What was it?" we asked in chorus.

"That bob cat — something with eyes like two silver dollars, not ten feet away. It sat watching me, and if I had had the gun I could have killed it sure. It will be back again I expect."

"Say we watch for it?" I suggested.

"The very thing," said one of the other boys.

Accordingly, we seated ourselves in the doorway of the tent, each armed with a gun loaded with buckshot. The camp fire was hardly distinguishable. Only a few brands were smoldering. The moon was rising now, and it cast a pale light down through the overhanging boughs. Objects near by were faintly visible. The silence was oppressive. Now and then an owl hooted from the dark woods, and no more mournful sound than this can be heard in the forest at night.

"Listen!" whispered Ralph.

We strained our ears for several moments, and heard a slight rustling among the bushes, some twenty feet distant. Then a twig snapped. The muzzles of four guns were pointed in the direction from which the sound came. We peered intently into the gloom, but were unable to see any animal or what might be mistaken for two glaring eyes. The rustling continued. It was evident that some

creature was prowling about close by. Then we heard it eating something — the bones of our grouse, I thought, from the crunching sound it made. I could almost locate the exact spot where the creature was, and yet I could distinguish nothing that bore any resemblance to an animal. The crunching of bones continued.

"Say we shoot?" ventured one of my companions.

To this suggestion we all agreed. Aiming our guns in the direction from whence the sound came, we fired as Ralph whispered, "Now!"

The great woods rang with the noise, and the hills across the Sound were stirred with the echo. Then it was all silent — more silent than before, it seemed to me. The lantern was lighted, and we sallied forth to see whether or not we had killed the midnight caller. The lantern revealed something white lying on the ground. Cautiously we approached it. Then a burst of laughter went up from four young throats. We laughed until we cried, as boys will, for instead of seeing the wild cat lying there, we saw the mangled remains of a skunk — a little baby skunk at that.

We had considerable sport with Ralph over his fiery-eyed wild cat, but that he saw the one which haunted our camp when we were absent, we never doubted in the least.

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